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TELEGRAPHIC ADDRESS—LANCET WESTRAND LONDON TELEPHONE NUMBER—GERRARD 5356

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LECTURE I.—THE CAUSES OF THE PROBLEM.

MR. PRESIDENT AND GENTLEMEN,—Egypt is the hub of the wheel of Empire. The importance of that ancient land is fully recognised from a military, political, and commercial standpoint. It has bulked largely in the world's history, and recent events have certainly not tended to diminish its status in those directions. It is, however, doubtful if, in this country at least, the significance of Egypt from a hygienic point of view is equally realised. And yet in what may be called "imperial medicine," Egypt must ever play an increasingly important rôle.

EGYPT AS AN INTERNATIONAL FILTER.

She lies at the gateway to the East, the Suez Canal traverses her territory, she acts as a great filter, a filter for disease. This filter, however, differs markedly from others with which we are acquainted, for the filtration it effects is a double one. It protects Europe from such diseases as plague and cholera, ship-borne from India, Mesopotamia, Arabia, and ports on the western Red Sea littoral, and it guards these countries and places from the risk of infection coming from southern Russia, the Levant, and various foci in the Mediterranean. In days to come there will be few more important quarantine stations than Suez, while Port Said and Alexandria keep watch and guard on vessels hailing from north and east and west.

Although a constant vigilance has to be exercised, no great strain is imposed upon those responsible, save at the time of the Mecca pilgrimage, when the migrations of the faithful occasion the utmost alertness. More especially is this the case when the pilgrimage is declared "brut" or infected. The term "brut" is a French word which has various meanings, such as rough, raw, crude, and so forth. It also signifies "void of reason," and seems almost to have been adopted on account of this meaning, for there is nothing about it to denote infection. In all probability it was employed merely as a convenient term, the antithesis of the French "net," and one with which the pilgrimage could be discreetly labelled, even if infection was merely suspected, not absolutely proved. When such a label was affixed the problem became one of much anxiety. Picture to yourselves the conditions of the Hedjaz. Vast throngs of people, often ill-fed and ill-clad, crowded together at such a pestilential port as Jeddah, an assemblage polyglot in the extreme and hailing from every quarter of the Moslem world, a concourse in some respects cleanly in its habits, thanks to the Mohammedan ritual, but ignorant of every law of modern hygiene, a great gathering which, having completed its devotions at the Prophet's shrine, was intent on one thing only—to return home as quickly, cheaply, and easily as possible.

Pilgrims by Road, Rail, and Sea.

While this was true of the majority, it is interesting to note that, owing to the difficulties of travel in the Hedjaz in pre-war days, many pilgrims after travelling by the railway to Medina, actually made for Egypt and then started off for Mecca, a curious roundabout way of attaining their goal, and one which introduced fresh sanitary complications. In any case, the crowded port was followed by crowded steamers whereon the pilgrims were packed almost like tinned sardines, for the voyage is short and the restrictions are none too stringent. Amongst this mass of humanity sweltering in the heat of the Red Sea plague or cholera might make its appearance and begin to claim its victims. The ship is then infected and is a danger to Egypt—a problem to be solved. Yet, again, she may merely hail from an infected port and require watching for a certain period—a different proposition.

But all pilgrims did not reach Egypt by the southern sea route. You are familiar with the Hedjaz railway, which has played so notable a part in the war. Formerly it played an equally important rôle as regards the Mecca pilgrimage and the trains were, at the time of the Haj, thronged with a multitude travelling, as Clemow has described, in open trucks or luggage vans. Amongst them were Egyptians, who often chose this route for their return journey and eventually reach the sea at Jaffa, Haifa or Beyrout, whence they took ship to Egypt, avoiding to some extent the restrictions placed upon those travelling via the Red Sea. (See map.)

So much for the rôle of Egypt as an international filter. The measures taken to deal with the problem of sea quarantine will be considered in due course, but it must be remembered that the war has introduced a new factor into the sanitary problem arising out of the relation of Egypt to her neighbours. This new factor is the railway linking the Nilotic territories with Palestine. Prior to the war the question of land quarantine was one of little importance. To the west lay Tripoli, separated from the populous lands of the Delta by a great desert, which was seamed only by caravan routes and uninhabited save by wandering Bedouins and where scattered oases afforded water and means of life. In the south Egypt merged with the Sudan, and there was more danger of the latter being infected from Egypt by way of the Nile than there was of Egypt being infected from the Sudan. Eastwards lay the desert of the Sinai Peninsula, an effective barrier between the Suez Canal and Syria.

Now, as by the stroke of an enchanter's wand, all is changed so far as this eastern frontier is concerned. An iron link has been forged, a link potent for good and evil, and in a few hours the traveller passes from the sands of Egypt to the mountains of Judea. It is conceivable that in the near future yet a third form of quarantine may have to be instituted, as there is every likelihood of Egypt becoming a halting-place for great airships en route from India to Europe.

Interesting as are these questions of aerial, land, and maritime quarantine, it must be understood that the main problem of hygiene in Egypt centres in the internal condition of the country.

MEDIÆVAL SANITARY CONDITIONS.

In the first place, it is necessary to remember that, so far as the great mass of the native population goes, sanitary conditions may be described as mediæval. In the second place, one must not forget that all that really counts in the Egypt of to-day is artificial. The country as we know it is the product of man's activity. Egypt is so very old that it is difficult to get beyond a period when man was not busy modifying it to suit his needs, but doubtless at the beginning the land was one huge desert with fertile strips bordering the Nile, strips dependent on the annual rise and fall of the great river. Then came man and harnessed the water to his uses. While, owing chiefly to the configuration of the land, he has not created any great change in Upper Egypt, he has established the green Delta with which we are now familiar, a Delta which in many respects is a hot-bed of disease. Irrigation, while conferring the greatest benefits on the land of the Pharaohs, while in reality creating modern Egypt, has been by no means an unmixed blessing, for closely associated with it are the two great worm diseases, ankylostomiasis and schistosomiasis (bilharziasis), which have produced such dire effects upon the fellaheen.

Considerations of climate enter little into the problem of hygiene in Egypt, for such influence as the climate exerts is largely of a beneficial nature, though it should be noted that the climatic conditions at certain seasons of the year are singularly favourable to the propagation of flies, and hence to the dissemination of such diseases as enteric fever and dysentery.

The Racial Factor in the Health Problem.

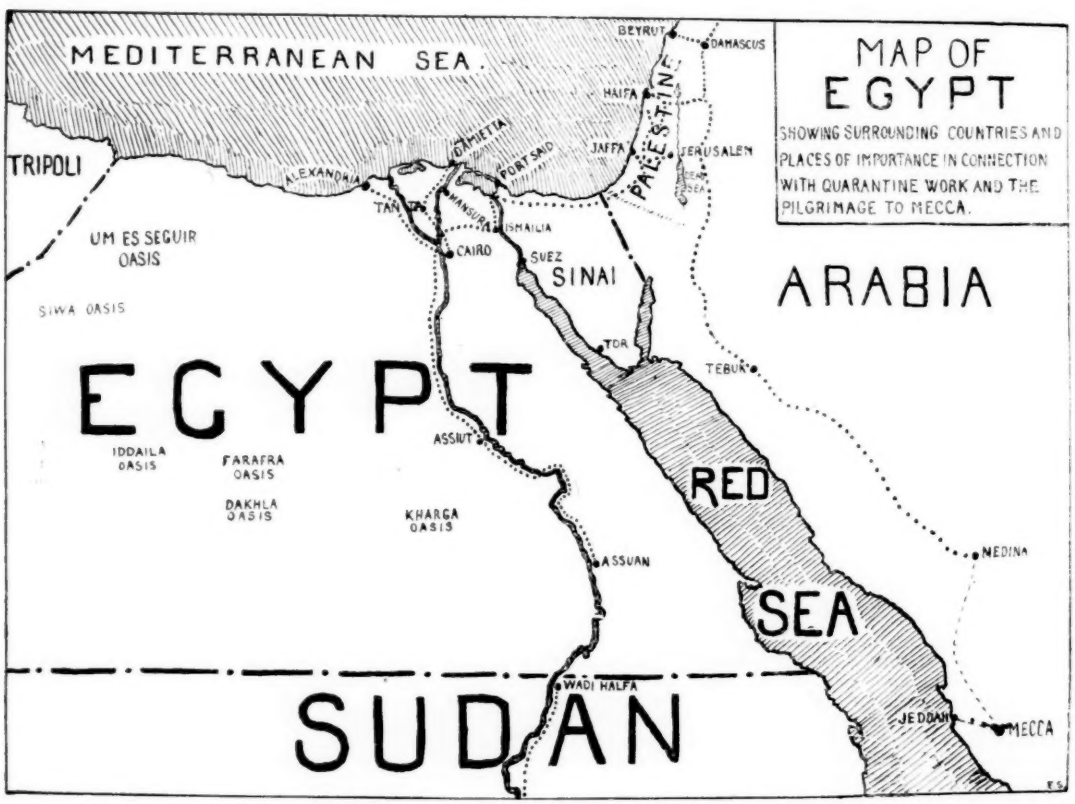
The race, and more especially those fellaheen of whom we have spoken, constitutes a very important factor in the health problem. Who are these brown-faced, blue-garbed sons of the soil? They constitute the immense majority of the population; they form the lowest stratum of the social organisation of the country; they are the descendants of those who, until Great Britain undertook the work of reformation in Egypt, were beaten and robbed, the prey of pashas and of usurers. Physically they are a sturdy race, and, as Lord Cromer has stated, when left to themselves, kindly and even jovial. These characteristics are more marked in the people of the Delta, those of Upper Egypt being somewhat

truculent and less easy to handle. Unhappily, from a hygienic standpoint, the fellaheen are also steeped in ignorance and superstition, void of initiative, with no outlook, with little ambition, content with the daily round of labour in the fields, and in many cases doomed to suffer much misery from preventable disease. As a recent Commission has said, and truly said: "To-day the greater part of Egypt is filthy and no self-respecting populace can be raised in filthy surroundings. As of old, Egypt is plagued by disease, and it is hopeless to expect a disease-ridden people to play their proper part in furthering the welfare of their country. The infant mortality of Egypt is appalling, actually one-third of the children born dying in infancy. The verminous condition of the fellaheen shows no improvement, though lice are now known to be conveyers of typhus and relapsing fevers which account for so many deaths." And, again, when speaking of the necessity for education and for improvement in village sanitation, it is stated that "the healthy fellah is happy and content because he has never known anything better, while the unhealthy fellah is far from being happy and content, though he is, perhaps, the most patient of sufferers."

It is, indeed, this quality of patience, an almost bovine patience, which is one of the chief features in the character of the fellaheen, but, so far as disease goes, there is a kind of hopelessness about it which is pathetic. Especially is this true of the women, who, in contrast to the men, wear black garments. Now black is the colour of mourning, and well may it be worn by the women of the fellaheen, for their lot, from a medical and sanitary standpoint, is too often a sad and weary one. I propose to consider the problem of the women first, for in eastern countries questions of health are very intimately bound up with the state of tne female population. Happily, the poorer women of Egypt, be they fellaheen or town dwellers, have not lacked champions in the past. Their most energetic and scientific supporter of late years has been Mrs. Elgood, a woman doctor who has laboured incessantly to improve their lot, and who, as medical officer to the Ministry of Education, has also fought the battle of the children.

Archaic Methods of Midwifery.

Dr. Elgood has pointed out that there must be at least 4,000,000 women in Egypt of child-bearing age. The general methods of midwifery she describes as archaic and brutal. No one knows how much puerperal fever occurs, but, taking Cairo alone, it is significant how many funeral biers are seen in the streets with silver bridal tresses adorning their head-pieces, the sign that a woman has died during her first year of married life. In any case, there can be no doubt that, apart from other ailments, the majority of lower-class Egyptian women suffer from uterine and ovarian complaints. Gonorrhœa is exceedingly common, syphilis far from rare, while the mental effect produced by the frequent loss of children must tend to depress vitality and induce apathy and despair. The harem system makes the problem of succouring these women difficult, though not hopeless. Naturally enough, they and their husbands object to male assistance, and, even at out-patient clinics, to the presence of male students or of "tamurgis," as the male hospital orderlies are called.



According to Dr. Elgood, the absence in most Government hospitals of a European matron or a woman doctor prevents the lower-class men entrusting their women to the care of such institutions. Another condition which leads to difficulties is the treatment of prostitutes in Government hospitals. So long as this class is admitted to the same building as the honourable women, so long will the latter object to being treated there, even though the prostitutes are housed in special wards.

Lastly, there is the question of hospital fees. Small though these are, they are prohibitive, for many of the working-class Egyptians are miserably poor. There is a rule that the very poor shall not be charged, but nearly all who attend hospital are in this state, for it is the last resort of the destitute. At the present time most of the maternity assistance in Egypt is rendered by dayas or midwives, poorly trained women of a low and dirty class, who are responsible for many of the deaths both of mothers and infants. In addition a certain number of hakimas or, as they

are more usually termed, mumarridas, exist, to whom further reference will be made when we consider the solving of this part of the Egyptian health problem.

Effect of the Mothers' Disabilities on the Child Population.

Healthy children are a nation's greatest asset, but how can the poorer Egyptian children be healthy when their mothers labour under the disabilities we have just considered, and are in addition dirty and ignorant? A third of them die as infants. Those who survive, especially if in the large towns, have a struggle for existence. A great number attain adolescence exhibiting some defect. Many harbour ankylostomes or schistosomes, or both, and suffer grievously in consequence. A large percentage are infected with other helminths, many have damaged eyes, some are cripples, others have splenomegaly, often combined with hepatic cirrhosis. Yet others acquire pellagra. Not a few are disfigured by small-pox, and probably a minority become healthy men and women. Yet there is no instruction in diseases of infants and children at the Kasr-el-Aini School of Medicine, the only institution in Egypt granting diplomas to practise the healing art, and the facilities for the gratuitous treatment of infants and children are woefully inadequate, save possibly where eye diseases are concerned.

How the Fellaheen Live.

We have digressed a little from the subject of the fellaheen, but, returning to them again, let us see how they live and labour and what ideas they possess as regards the cure and prevention of disease. They inhabit villages which, though often picturesque, transgress wellnigh every law of health; congeries of flat-roofed, ill-ventilated, mud dwellings, some of them partly underground, crowded like rabbit warrens, and where the houses are shared alike by man and his domestic animals—donkeys, cattle, buffaloes, sheep, goats, cats, dogs, rabbits, fowls, and pigeons. The roofs are usually piled high with grass or rubbish, and commonly serve as latrines for the women of the household. The lanes or passages between the houses are narrow, often tortuous, and not infrequently blocked by stacks of manure. There are many blind alleys. There is no sweep of purifying air. No sanitary conveniences of any kind exist, but rats swarm, and at certain periods there is a plague of flies. Hard by there is often a birka or pool which may serve as a mosquito nursery, and the water of which, frequently used for drinking purposes, is generally grossly polluted. It may harbour the infected snail hosts of the schistosomes and be a danger to those bathing in it. The usual source of water-supply is a canal into which all manner of filth finds its way and in which buffaloes love to soak themselves.

The larger villages, if judged by the number of their inhabitants, might well be regarded as considerable towns, and may contain better-class houses in which the wealthier landowners live. Most of the fellaheen, however, are small proprietors subsisting on the produce of their fields. Apart from the presence of disease and deformities, their lot under British rule is by no means a hard one, and certainly compares favourably with that of the poor of the congested towns, into which the rural population tends to flock, thereby creating one of the most serious of the sanitary problems that have to be faced. There is no room for the newcomers, adequate building schemes to cope with the difficulty are non-existent, and the result is overcrowding with all its attendant ills, evils accentuated in a land where the lower orders are infested by vermin, and where the plague-carrying rat flea abounds.

One has no wish to paint too gloomy a picture of Egyptian life. There is much in it that is cheerful and attractive, at least in the country districts. The ravages of disease are not very apparent to the casual observer. It is true he cannot fail to be struck by the number of blind persons or unfortunates with defective vision; he may notice that deformities are common, and occasionally be shocked by the sight of a wretched leper, but otherwise he would probably regard the populace as strong and well-liking. It is not until one studies statistics, visits the dispensaries and hospitals, becomes familiar with the asylums and homes for incurables, inspects the slums of the great cities, and is brought into contact with epidemics that one appreciates how great a burden of suffering and inefficiency is borne by the populace of Egypt, and how much of this burden is preventable. Take the work of the fellaheen, work with the primitive plough and the fass (hoe or spade) in the irrigated fields, work which entails walking or standing ankle- and knee-deep in the alluvial mud. Owing solely to the pollution of the soil with human excrement, there is an ever-present risk of infection with the larvæ of ankylostomes, resulting in that hookworm disease of which, thanks to the Rockefeller Institute and its campaign, we have heard so much of late years.

Abysmal Ignorance and its Results.

Again, either in the course of his work or when bathing or washing or drinking, the fellah is often brought into contact with water which, owing to pollution with urine or fæces, is charged with the cercariæ of one or other of the human schistosomes, and in many cases he falls a victim to schistosomiasis. Both schistosomiasis and ankylostomiasis are serious diseases which can be prevented by suitable hygienic measures, and the same is true of many others. It is easy to proclaim this fact, but to tackle preventable diseases properly it is highly desirable to enlist the sympathy and support of the populace who suffer from its effects. Such is no easy task even amongst an educated community. The native Egyptian, however, is still plunged in abysmal ignorance as regards the nature and cure of disease. Lord Cromer in his book, "Modern Egypt," quoting from an interesting paper written by the late Dr. Sandwith in 1884, cites several instances of strange superstitions which showed that the medical knowledge amongst the poorer classes was not materially in advance of that current in the days of the Pharaohs. Here is one not quoted, but culled from the same authority. Numerous alleged cures exist for ophthalmia, "such as wearing a red bead or gold ornament on the forehead or rowing across the Nile at Cairo to deposit a lump of mud on the further shore. During the process of some of these cures it is considered most important that the eyes should not be washed for 40 days, and it is not uncommon to see children with both eyes completely covered with a dry scab which the parents refuse to have removed, although pus may be streaming down the child's cheeks."

It is to be feared that in the thirty odd years which have elapsed since Dr. Sandwith collected these curious beliefs there has been no very great change, though, doubtless, there has been some lessening in this ignorance and credulity, for the leaven of education has been at work, new ideas are abroad, and the doctor is more trusted than he used to be.

THE CONDITIONS IN URBAN AREAS.

Hitherto we have been considering chiefly the rural districts and the fallaheen. Let us take a look at the urban populations and at the conditions which exist in such great cities as Cairo and Alexandria. I cannot do better than quote Lord Cromer's vivid description of the first ten people a visitor to Cairo may happen to meet in the streets of "that maze of old ruin and modern café, that dying Mecca and still-born Rue de Rivoli," as it was christened by Sir William Butler.

"The first passer-by is manifestly an Egyptian fellah who has come into the city to sell his garden produce. The headgear, dress, and aquiline nose of the second render it easy to recognise a Bedouin who is, perhaps, come to Cairo to buy ammunition for his flint-lock gun, but who is ill at ease amidst urban surroundings, and will hasten to return to the more congenial air of the desert. The small, thick-lipped man with dreamy eyes, who has a far-away look of one of the bas-reliefs on an ancient Egyptian tomb, but who Champollion and other savants tell us is not the lineal descendant of the ancient Egyptians, is presumably a Coptic clerk in some Government office. The face, which peers somewhat loweringly over a heavy moustache from the window of a passing brougham, is probably that of some Turco-Egyptian Pasha. The man with a bold, handsome, cruel face, who swaggers by in long boots and baggy trousers, must surely be a Circassian. The Syrian money-lender, who comes next, will get out of his way, albeit he may be about to sell up the Circassian's property the next day to recover a loan of which the capital and interest at any ordinary rate have been already paid twenty times over. The green turban, dignified mien, and slow gait of the seventh passer-by denote some pious Sheik perhaps on his way to the famous University of El-Azhar. The eighth must be a Jew, who has just returned from a tour in Asia Minor with a stock of embroideries, which he is about to sell to the winter tourists. The ninth would seem to be some Levantine nondescript, whose ethnological status defies diagnosis; and the tenth, though not easily distinguishable from the latter class, is in reality one of the petty traders of whom Greece is so prolific, and who are to be found dotted all over the Ottoman dominions. Nor is the list yet exhausted. Armenians, Tunisians, Algerians, Soudanese, Maltese, half-breeds of every description, and pure-blooded Europeans pass by in procession, and all go to swell the mass, if not of Egyptians, at all events of dwellers in Egypt."

Naturally this mixture of races adds to the difficulties of the sanitarian, which have been further enhanced by the existence of the capitulations. These were at first really

concessions or privileges granted by Turkey to foreigners resident in Egypt, but under the lax rule of the Khedives the privileges grew into abuses, multiplied in various directions, and became a curse to the country and a great bar to sanitary reform, because many of those who offended against the public health could not be brought to book. Happily, the capitulations are now on their last legs, but they have wrought untold harm for many years. This is why in Cairo so many of the so-called *établissements insalubres*, really offensive trades, thoroughly deserve their title; this is one reason why it has been so difficult to deal with the mosquito pest; this has been one of the causes which have wellnigh broken the heart of the energetic medical officer of health in his struggle to abate nuisances and secure convictions.

But the capitulations are by no means the sole reason why Cairo has a high death-rate and in many parts is insanitary in the extreme. In 1911 in a well-known medical work there appeared the following criticism which gave rise to much heart-burning in certain quarters. After commenting on the cesspools, the mosquitoes, the sewage-sodden soil, and the vermin of the Egyptian capital, the writer goes on to say:—

"The human mortality is enormous, especially the infantile mortality. The figures supplied by the Public Health Department are unreliable (as I know, for I have assisted to compile some of them). The actual population is unknown, many deaths are probably never reported, and sickness is not usually notified. All deaths are supposed to be registered, the diagnosis usually being made by a brief inspection of the dead body. Doctors will not notify disease because they say that it ruins their practice. Landlords prefer to knock holes in the sides of their cesspools and allow the sewage to flood their cellars and basements rather than go to the expense of having them pumped out. The water-supply is not the best obtainable, the streets are not properly cleaned, and enormous heaps of dung and rubbish have been allowed to accumulate for years past on the outskirts of the city. Many of the streets are not metalled; which perhaps is a good thing, for the rough surface acts as a sponge for the stale urine which would otherwise collect in puddles. Dung and street refuse are used as fuel generally; and large collections of this rubbish are kept for this purpose on the roofs of the 'Turkish baths.' Nearly all the dogs have been destroyed owing to outbreaks of rabies, and many cats have taken their place as natural scavengers. Hordes of flies, which breed in the dung and rubbish, abound everywhere, and are nearly as great a nuisance as the mosquitoes. Without exaggeration, Cairo may be described as a city which is hardly fit for habitation, and at present it must rank with Moscow, Pekin and Hankow as being one of the most insanitary spots in the world.

Happily there has been in some directions a considerable change for the better since the above appeared.

Insanitary Old Cairo.

I myself recall an incident which opened my eyes as to the insanitary state of affairs permitted to exist in a city the European part of which almost merits the old title of Cairo the Magnificent, so far as spacious streets and fine buildings are concerned. A certain Sewage Transport Company approached me with a view to obtaining a concession for dealing with the conservancy of Khartoum. I met the company's representatives in a very ramshackle and decayed building in Old Cairo. As is usual in Egypt, coffee was served, and on finishing my cup I discovered amongst the syrup at the bottom of it a dead fly. I fear this prejudiced the company's application from the outset; but in any case it could never have been entertained, for the ideas advanced were, to say the least, unprogressive, and the methods of working in Cairo were disgraceful. Pail contents were collected in those insanitary juggernauts called Crowley carts, which jolted and splashed along the unpaved, badly kept roads, to the joy of thousands of flies which bore them company. The cart contents were dumped into shallow open depressions in the soil no great distance from the city confines, and were there mixed with material dug from the neighbouring gebels, which is said to have fertilising properties. The nauseous mixture, after drying in some measure, was spread out on the top of these same gebels for further desiccation. Naturally it pulverised and naturally the south wind wafted it down upon the city. Is it possible to imagine a more filthy and insanitary procedure? Is it strange that sore throats are frequent in this city of dust and smells? These methods are still in vogue, for the great drainage scheme has not yet touched Old Cairo, and though there is better supervision the conditions remain very unsatisfactory. One has only to read the report of the Sanitary Commissioner sent out by THE LANCET in 1908 to realise how necessary it was, and still is, to cleanse the Augean stable. He paints a lurid picture of the rubbish heaps to the north of the city, and though things have improved in some measure, a good deal yet remains to be done. Elsewhere, amongst the tangle of narrow streets in the Bulaq, Saida Zeinab, and Bab-el-Sharia quarters all manner of insanitary conditions continue to flourish. The meat market is very far from ideal, the tripe market an abomination. Many of the cowsheds and dairies are filthy in the extreme. The roofs of the houses are used as latrines, the condition of the wells in their basements is enough to suggest cholera. Filth and flies, overcrowding, vermin, infected food and drink, stagnant air, disease and destitution, all are there. Is it any wonder the Sphinx sits yonder in the desert and gazes with stony and sardonic smile over a city with a death-rate of nearly 40 per 1000 per annum?

The Same Evils in Modern Alexandria.

But you will say, after all Cairo is a great and ancient native city, an eastern city, and we know what happens to the man who tries to hustle the East. Let us then take train to Alexandria, which is largely a European city, a proud and prosperous city with a municipality and, *mirabile dictu*, wellnigh as fine a slaughter-house as is to be found anywhere in Europe. Here, however, are the same evils—slum quarters or echèches of the worst description, centres of typhus and relapsing fever, often cheek by jowl with better-class dwellings, often close to areas inhabited by well-to-do Europeans. The conditions at the hammams, or Turkish baths, are scandalous, for at these places the town refuse, often ill-smelling and foul, is used as fuel, and, being stored anyhow and everywhere, is most offensive and dangerous. It breeds flies galore, it affords a happy hunting-ground for lean donkeys, greedy goats, and mangy cats. The creatures who handle it look like soot-besmirched myrmidons of Satan, and, strange to say, in the furnaces which it feeds beans are baked in earthenware jars from which they are sold in the neighbouring streets.

Until the sanitary authorities of the Expeditionary Force took stringent action most of the aerated water factories, the bakeries, pâtisseries, ice-cream shops, and the kitchens of the restaurants were sources of danger to the community, and in certain instances disgusting as well as dangerous. The markets leave much to be desired, the municipal arrangements for refuse destruction are totally inadequate, the methods of disposal of latrine-bucket contents and sewage sludge at Mex and Gabriel offensive and noxious, the Infectious Diseases Hospital a disgrace to a city like Alexandria, and the municipal bacteriological laboratory a place in which it is a crying shame to ask any scientist to work—at least during the hot, moist summer.

It is the same more or less in all the towns of Egypt. Here and there, as at Suez and Port Said, good work by energetic officials has remedied matters in some degree, but not so very long ago I encountered amongst the mounds of rubbish awaiting incineration at Port Said the most remarkable and nauseating odour it has ever been my ill fortune to experience, and I may say I am somewhat blasé as regards insanitary effluvia. It had a peculiar sweet flavour which defies description and demanded instant flight, so that I am still wondering what could possibly have produced it.

THE PRINCIPAL INFECTIVE DISEASES.

Now, what are the principal diseases which form the natural corollary to this state of affairs in the Egypt of to-day—the Egypt, remember, over which this country has cast her mantle of protection, which has a rightful claim upon us for assistance and advice in safeguarding the health of her people, which, if her sanitary salvation is to be secured, must be guided wisely and well along the paths of hygiene?

I have already spoken of the two great worm diseases, reference has been made to the frequency of other helminthic disorders, typhus and relapsing fever have been mentioned, allusion has been made to enteric fever, dysentery, plague, cholera, small-pox, pellagra, leprosy, splenomegaly, idiopathic hepatic cirrhosis, and ophthalmia. There has been some reference to venereal complaints, to deformities, and to gynæcological disorders, but we are by no means at the end of the list. Before proceeding, however, a few words may be said about one or two of those just cited. Dysentery amongst the native Egyptians, when not a symptom of rectal bilharziasis, is chiefly of the amœbic type. Whether bacillary or amœbic, it is a filth disease the cause of which, like those of enteric, may be summarised as careless contact cases, carriers—chiefly cooks—drains, dairies, dirty drinking-water, the dust of dried dejecta, and the repulsive regurgitation, dangerous droppings and filthy feet of fæcal-feeding

flies fouling food. Plague, at least in its bubonic form, is due to vermin, cholera in the main to polluted drinking water, and the way in which cholera is held in check is a fine tribute to the work of the Department of Epidemic Services. Small-pox has few terrors for the vaccinated, and yet it is sad to see its ravages in Egypt. Pellagra is still a puzzle, but is possibly a combination of a food deficiency disease and an auto-intoxication from the bowel. Anyhow, it helps to fill the asylums and causes considerable misery and distress. Leprosy, another enigma, so far as its method of spread is concerned, is certainly associated with dirt and destitution, and is by no means a stranger to some parts of Egypt. Yet nothing is done for it, and the leper is free to infect the healthy.

Splenomegaly, often accompanied by cirrhosis of the liver, may be due to various causes, all of which are not yet fully understood, but some of which are assuredly of an insanitary nature; while ophthalmia, in all its various and disfiguring forms, is too often directly traceable to lack of the elements of hygiene and to the ubiquitous fly. Is it not a terrible thought that at the time of the last Census it was found that more than half a million persons in Egypt were blind in one or both eyes! All this is a sorry tale, whether or not we believe man is made in God's image, but there is more to tell. Dengue fever, now definitely known to be mosquito-borne, occurs every now and then in Cairo and elsewhere, malaria still lingers near Ismailia, and is by no means infrequent along the Suez Canal. It is prevalent and severe in the Kharga oasis and lurks in the Delta to an extent which is only now becoming appreciated. Filariasis, another mosquito-carried disease, possesses foci in the land. An unknown fever resembling both typhus and typhoid but of a relapsing type made its appearance in Cairo in 1914 and accounted for many deaths, undulant fever (a preventable malady) occurs, sand-fly fever claims its victims here and there, diphtheria is not uncommon, rabies is present to a disquieting extent, while skin infections, and more especially boils, show that the plagues of Egypt, if they once ended with the death of the first-born, have assuredly assumed a new lease of life.

CARCINOMA OF THE RECTUM:

THE CHOICE OF OPERATION.

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IT is my purpose in this article to discuss the relative merits of, and the indications for, the various operations which have been devised for carcinoma of the rectum.

It must be regarded as a lamentable fact that only a small percentage of cases of rectal carcinoma are capable of radical extirpation when first seen by the surgeon. I have asked a number of surgeons to give me their estimate of the percentage of operable cases; the lowest figure was 20 per cent. and the highest 40 per cent. My own experience is that it is about half-way between these figures, rather under 30 per cent. The figures vary in the two sexes. Taking a rough estimate, out of every 100 cases in the female 40 are operable, out of every 100 in the male only 20, giving a figure of 30 per cent. for the two sexes.

Early Stages of the Disease.

Carcinoma of the rectum probably starts either as a small ulcer or as a small polypoid growth. But how rarely does one come across a case in such an early stage. One would think that either of these would cause sufficient discomfort to arrest the patient's attention and cause him to seek advice. But experience shows that this is not the case, and the majority of patients, even intelligent and educated ones, present at the first examination a large ulcerating process extending more or less completely round the bowel.

The really early cases are so rare that it is easy to remember them.

A lady, aged 37, consulted me in 1912 on account of a single attack of hæmorrhage from the rectum—bright red, not profuse. She had no other signs or symptoms. She did not look ill, and rectal examination was negative. The sigmoidoscope revealed a stalked polypus about the size of a Barcelona nut in the sigmoid colon. I opened the abdomen and excised the polypus with its base and a wide area of the bowel wall surrounding it, and closed the opening with Lembert sutures. She made an uneventful recovery. Microscopical examination revealed, to my surprise, a typical columnar-celled carcinoma. She has exhibited no signs of recurrence. The case demonstrates the value of sigmoidoscopic examination, if such demonstration is still needed.

But this type of case is the exception. The one we have to deal with most often is that in which a large mass is palpable within reach of the examining finger. The question to be decided is, Is it capable of radical extirpation? I hold very strongly the view that the question cannot be adequately decided unless and until the patient is examined under an anæsthetic. It is sufficient at the first examination to know that there is a carcinoma. Digital manipulation of the growth nearly always causes great pain.

Examination under an anæsthetic will reveal a number of helpful points: (1) the extent of the growth in both directions—i.e., whether it completely encircles the bowel and (if the examining finger can be introduced through the lumen of the growth) how far it extends upwards; (2) the nature of the growth—i.e., whether it is a soft friable fungating mass (as it most often is) or whether it is a hard fibrous ring; (3) the mobility of the growth—i.e., whether it is fixed behind to the sacrum or it front to the bladder in the male or to the posterior vaginal wall in the female; (4) deep palpation of the relaxed abdominal wall may enable the surgeon to feel enlargement of the lumbar glands or of the liver.

Colostomy.

If such examination reveals the case to be a hopelessly inoperable one a colostomy should be done, and done at once. I remember being taught as a student that the patient should be put on a suitable diet calculated to leave as small a fæcal residue as possible and kept under observation; and that a colostomy should only be performed as soon as symptoms of obstruction supervened. This teaching, I believe, to be wholly and utterly wrong, for the following reasons: (1) the patient will get progressively weaker as time goes on and less able to withstand the shock of an abdominal operation; (2) if the surgeon is to wait until symptoms of obstruction supervene there will necessarily be some hypertrophy and dilatation of the descending colon and the operation may be rendered technically difficult; (3) it is probable that deflection of the intestinal contents from passing over the surface of the growth may retard its progress; and (4) last, but not least, the patient is already suffering from some degree of chronic intestinal stasis, and an immediate colostomy will relieve him from the multitude of disorders associated with that condition. In fact, the improvement which often follows colostomy is quite remarkable.

The colostomy should be a hypogastric one, the incision being a vertical one through the centre of the left rectus abdominis muscle just below the umbilicus and a loop of the descending colon brought out and fixed in position by passing a stout glass rod through its mesentery. Hypogastric colostomy has several advantages over inguinal colostomy done through a muscle-splitting incision in the left iliac fossa. The opening is in the centre of the abdomen in a position where the patient can attend to it with the greatest ease and comfort, and the cup remains in position whatever attitude the patient may adopt, whereas in the inguinal colostomy the cup is apt to ride up on the anterior superior iliac spine when the patient sits down and allow an escape of fæcal matter. Further, the rectus abdominis develops in the course of time a certain degree of sphincteric power, which the muscles in the left iliac fossa rarely, if ever, do.

Some surgeons perform a transverse colostomy. I do not advise it because the great omentum may make the operation difficult, and my experience is that the spur is rarely as good and there is a tendency to spontaneous closure.

There is a popular idea that to have a colostomy is the worst fate in the world, rendering the owner intolerable to himself and to others, and that it is better to die of the cancer. This is a fallacy which should be combated. Life with a colostomy is not, of course, ideal, but it is far from intolerable; and I know of one medical man who has had a colostomy done for diverticulitis, and now that the diverticulitis is cured refuses to have the colostomy closed and conducts a large practice in comfort.

When is a Radical Operation Justifiable?

The contraindications may be considered under two headings.

(1) *General.*—Advanced age is a contraindication. It is difficult to lay down an absolute rule; to say, for instance, that radical operation must not be undertaken in an individual of 60 years or over. Some people of 60 are, pathologically speaking, only 50; others are 70. Experience alone can help one to decide on this point. Recognisable metastasis—e.g., enlargement of the liver with umbilicated nodules, or enlarged lumbar glands palpable through the abdominal wall under an anæsthetic—is an absolute contraindication, as is the condition known as cachexia.

(2) *Local.*—Direct extension may have extended so far as to form a recto-vesical fistula. This is an absolute bar to radical operation. Fixation of the growth in any direction, anteriorly to the prostate or bladder in the male or to the posterior wall of the vagina in the female, laterally along either levator ani muscle or posteriorly to the coccyx or sacrum diminishes the prospect of success in proportion to the density of the fixation. Personally I regard dense fixation anteriorly in the male as a definite contraindication. In the female the posterior wall of the vagina can be removed with the bowel. Fixation in other directions is less serious and operability depends upon the degree of it present. In some cases fixation has spread in the direction of all points of the compass and these are inoperable.

Unsound Operations.

When a decision has been arrived at that the case is operable, what operation should be done? I am convinced that any operation which aims at leaving a normal anus—i.e., any operation which is not associated with a colostomy—is a bad operation. It is pathologically unsound because it leaves behind those very areas which are liable to become the seat of recurrence. Three such operations have been described.

1. Rectorrhaphy or trans-sacral excision of the growth with end-to-end anastomosis. This consists in a few words of removing the coccyx and part of the sacrum if necessary, freeing the portion of bowel where the growth is situated, dividing the bowel above and below the growth and performing an anastomosis of the two ends. It is difficult, almost impossible, to be certain of so removing all the affected tissues as to make reasonably sure against recurrence; the anastomosis rarely, if ever, holds per primam and usually leaves a posterior fistula, which takes weeks or months to heal; and, finally, there is often left an ugly and intractable stricture at the level of the line of suture.

2. The abdomino-anal operation. The early stages of this resemble those of the abdomino-perineal. The abdomen is opened in the middle line, the lower part of the sigmoid and the rectum freed from their attachments and pushed down below the peritoneal pelvic floor, which is reconstituted by suture. The abdomen is closed. The patient is turned on his side. A posterior incision is made and the coccyx removed, if necessary. The rectum is cut away from the external sphincter, which is left but divided posteriorly. The bowel is pulled down as far as it will come and is fixed inside the sphincter, which is reunited. All the bowel distal to the sphincter, this being the portion bearing the carcinoma, is removed at a level of an inch below the anus. This operation is more radical than the last. But if the contents of the ischio-rectal fossa have been thoroughly removed with the levatores ani and the internal sphincter the sigmoid, which has been brought down to replace the rectum, cannot and does not behave like a normal rectum, and infinite trouble with defæcation is usually experienced, not to mention the fact that some degree of stenosis at the anal orifice is a common sequela.

(3) Kraske's operation and its modifications. In this the coccyx, and, if necessary, the lowest part of the sacrum, is removed, a perianal incision is made and the rectum is dissected up until it is free well above the growth. The bowel is divided above the growth and the open proximal end is fixed on to the upper part of the wound as an artificial anus. The artificial anus so formed develops no sort of control, and is in such a position that the patient is totally unable to look after himself. This operation is, in my opinion, quite unjustifiable, and I hope it is falling into disuse.

Satisfactory Radical Operations.

There are, as I think, only two satisfactory radical operations for carcinoma of the rectum: (1) the combined abdomino-perineal, and (2) colostomy with high perineal excision later, which I will call for short the two-stage operation, and I propose to discuss their respective merits.

(1) The combined abdomino-perineal operation. I do not propose to describe the technique in detail since it is sufficiently well known. The abdomen is opened by a paramesial incision with the patient in the Trendelenburg position, the inferior mesenteric artery is divided between ligatures, and an incision made in the mesentery of the colon on either side. These incisions are produced to meet in front of the sigmo-rectum. A separate incision about two inches long is made through the centre of the left rectus abdominis muscle. The bowel is divided at the apex of the omega loop, and both ends are closed with a basting stitch. The proximal end is brought out through the separate opening and fixed in position so as to form a terminal colostomy. It is well to make a small incision in the exposed end and tie in a catheter, as advocated by Mr. Sampson Handley. This has two advantages: (i.) flatus can escape, and (ii.) saline infusions can be given through the catheter if desired. The distal end is freed from its connexions and pushed down into the pelvis, and the peritoneal pelvic floor is restored above it by suture. The abdomen is closed and the patient turned on the left side. The anal orifice is closed with a running suture and an incision made round it, which is continued upwards in the middle line behind. The coccyx is removed if necessary. The connexions of the rectum proper are cut through at as wide a distance from the bowel as possible. The levatores ani should be divided near their origin, and the whole of the bowel below the point of section is removed en masse. A large drainage-tube is inserted in the posterior wound and the skin edges brought together with sutures.

(2) Colostomy with excision at a later stage. In this a hypogastric colostomy is performed and opened on the third or fourth day. A fortnight later, when the colostomy is well established and working adequately, the second stage is undertaken. The anus is closed, an incision made round it and extended upwards in the middle line behind and the coccyx removed as in the abdomino-perineal operation. The connexions of the rectum are cut through as far away from the bowel as possible; and the freeing of the rectum is continued upwards carefully and gradually until the pelvic peritoneal floor is reached anteriorly. The peritoneum is deliberately opened and the freeing of the bowel is continued, clamping the vessels on its posterior aspect until a portion of bowel completely covered by peritoneum can be comfortably reached. A clamp is put on at this level and the distal portion of bowel is removed. The proximal end is closed with a basting stitch, and its closure made further secure by a superimposed circumferential Lembert suture. This end may be allowed to drop back into the peritoneal cavity or may be fixed to the pelvic peritoneum. The pelvic peritoneum is formally closed, as in a laparotomy. A tube is inserted for 48 hours in case of oozing and the skin edges brought together by suture. Primary union of the posterior wound should result.

The important thing is that the bowel should be brought down so far that it is divided at a point where it is completely covered by peritoneum. If this is done it can be returned to the peritoneal cavity without risk. Any attempt to divide the rectum below the pelvic peritoneal floor means that a portion of bowel uncovered by peritoneum is left in the pelvis. The stitches give way and a fistula results which may persistently refuse to close, and first intention healing of the posterior wound (a point of prime importance to the patient's comfort) is impossible.

At first sight the abdomino-perineal operation appeals to the imagination as the more radical and therefore sounder procedure. But it has to be confessed that the abdomino-perineal operation is associated even now with a high primary mortality—i.e., death as the immediate result of the operation. When it was first introduced this mortality must have been at least 40 per cent. It is difficult to get exact figures, but that is my impression. With our improved technique of to-day, and the more judicious selection of suitable cases, the figures have shown an improvement. At this date I estimate the primary mortality as being roughly 15 per cent. in females and nearly 25 per cent. in males—that is, 20 per cent. in all cases, a formidable consideration for any surgeon to face.

Common Causes of Death.

These are: (1) *Shock.* This can be largely combated by giving a continuous submammary infusion of saline during the course of the operation.

(2) *Peritonitis.* This is a low form which makes its appearance recognisable clinically about the fifth or sixth day, and death ensues two or three days later. It is due to soiling of the peritoneal cavity at the moment when the bowel is divided and its ends sutured; in other words, to indifferent technique. But in spite of every possible precaution, it must be admitted that it does occur.

(3) *Intestinal obstruction.* This is generally due to one or more coils becoming fixed by plastic adhesions to the line of suture restoring the pelvic floor and acutely angulated, or as happened in one of my cases, to a coil becoming strangulated round the colon at the back of the colostomy wound. This occurs a few days after the operation and the patient is rarely in a condition successfully to withstand the shock of another laparotomy even if the diagnosis be made in time.

In 1915 I myself lost four male patients consecutively in whom I had performed the abdomino-perineal operation, one from shock, one from peritonitis, and two from intestinal obstruction.

On the other hand, the primary mortality of the two-stage operation should be nil or, at any rate, so small as to be negligible.

A Question for Consideration.

This, then, is the question we should put to ourselves. Is the possibility of radical extirpation of the growth with freedom from recurrence so much greater in the combined abdomino-perineal operation than in the two-stage operation that we are justified in facing the extra risk of its primary mortality? The only difference between the patients after the two operations is this—that the patient after the two-stage operation still retains a portion of bowel distal to the apex of the omega loop.

The question, therefore, further resolves itself into this. Is this portion of bowel a common seat of recurrence? It need hardly be remarked that recurrence is due to: (*a*) indirect extension, and (*b*) direct extension. Indirect extension spreads either by the portal venous system to the liver or by the lymphatics to the retro-peritoneal glands. It does not concern us in this argument, since in neither operation is any attempt made to deal with it. In fact, as I said above, if its presence is clinically recognisable it is a contraindication to radical operation.

Direct extension may be (i.) intramural or extramural. My own belief is that intramural extension certainly takes place round the bowel and down the bowel, but that if the growth extends *up* the bowel it does so only for a very short distance. I have yet to be convinced that the bodies which have been described in the submucous layer of the bowel at a distance of some inches from the growth are carcinomatous at all, and I have not seen a case where a fatal recurrence has occurred in the bowel left after a free perineal intraperitoneal excision.

But direct extramural extension is a different matter, and I believe that the most important channel by which the growth extends is the fascia covering the levator ani. When we see a recurrence after a radical operation for carcinoma of the rectum it is usually in the form of a fungating mass which has spread down the wall of the ischio-rectal fossa and fungated through the skin in or near the line of the posterior incision; it has, in fact, spread down from a portion of the origin of the infected levator ani which was left behind.

If this is so, the possibility of eradicating the disease should be equally great in the two-stage operation as in the combined abdomino-perineal. I am therefore putting forward my view that considering the respective mortalities of the two operations the two-stage operation should be regarded as preferable in the great majority of operable cases of carcinoma of the rectum; it should be the operation of election.

There is, however, one class of case where the two-stage operation is not feasible and the abdomino-perineal is the only one which gives a chance of removing the growth—i.e., where the carcinoma is situated at the junction of sigmoid and rectum, too low down to admit of excision and end-to-end anastomosis from above and too high up to allow of excision from below.

Conclusions.

(1) Only 30 per cent. of cases of carcinoma of the rectum admit of radical operation when first seen.

(2) When radical operation is impossible, a hypogastric colostomy should be done *at once*.

(3) Radical operations which aim at retaining the anal canal are pathologically unsound.

(4) The only sound radical operations are: (i.) the two-stage operation (colostomy and intraperitoneal excision by the perineal route later); and (ii.) the combined abdomino-perineal operation.

(5) Of these, the former is the better except in the case of a growth situated at the junction of the sigmoid and the rectum.

NOTE ON A METHOD FOR THE SEDIMENTATION OF TUBERCLE BACILLI IN SPUTUM.

BY J. G. GREENFIELD, M.B., M.R.C.P., B.SC.;
AND
J. ANDERSON,
FORMERLY PRIVATE, R.A.M.C.

THE following method has been in use for over a year in the laboratory connected with a large military chest hospital, which was constantly receiving fresh cases of suspected phthisis. Up to 20 samples of sputum per diem have been dealt with by its use, and we have found it so much more practical and reliable than any of the published sedimentation methods that we think it is worth while to make it more generally known.

The Method Described.

5 c.cm. of sputum are mixed with twice their volume of—

Sod. carb. (cryst.)	1
Acid carbolic (cryst.)	1
Water	100

in a centrifuge tube; the tube is then covered with a rubber cap, shaken for a few minutes and put in the incubator for 12 to 24 hours. (If a number of sputa are to be tested they can be placed in numbered tubes in an ordinary test-tube rack and kept in order during further stages.) At the end of the time the tubes are centrifugalised for about 15 minutes, the supernatant fluid poured off, and films made from 2 to 4 loopsful of the deposit are stained in the usual way.

Advantages.

The chief advantages of this method are as follows:—

1. Its rapidity, as it really takes less time than the direct smear method, especially if a large number of sputa have to be examined, as the rapidity with which the frankly positive sputa can be picked out more than compensates for the slightly longer technique.

2. The sputa when taken out of the incubator are sterile in the majority of cases. We have cultured many sputa on to Dorset's egg medium with uniformly negative results both as regards tubercle bacilli and pyogenetic organisms. Of two guinea-pigs inoculated from sputa containing numerous tubercle in every field, only one became infected. This pig was injected with 2 c.cm. of a very purulent deposit which contained vast numbers of tubercle bacilli. It would doubtless be possible so to arrange the strength of carbolic used that the pyogenetic organisms would be killed off, leaving some viable tubercle bacilli; but for routine laboratory work the advantages of killing off the bacilli before making the smears cannot be over-estimated.

3. The films resemble the direct smears both in the relative proportion of other organisms present and in the presence of mononuclear and polymorphonuclear cells, but the mucus is not stained.

Table showing Number of Bacilli Counted in 15 Fields.

No. of case.	Direct smear.	Ellermann's method.	Simplified method.	No. of case.	Direct smear.	Ellermann's method.	Simplified method.
1	49	47	251	11	15	18	98
2	19	109	107	12	76	+	+
3	1	+	+	13	38	96	161
4	5	149	120	14	0*	6*	14*
5	2	7	17	15	2*	104	150
6	5	72	111	16	20*	+	+
7	16	26	204	17	12*	104	126
8	14	453	537	18	397	+	+
9	0	5	68	19	2	16	99
10	0	5	7	20	25*	67*	200*

+ = more than 1000. * = after prolonged search.

The relative ease with which tubercle bacilli can be found by this method, as compared with the examination of the direct smear and of films made by the full technique of Ellermann and Erlandsen, is shown in the above table. In almost every case as many, or more, bacilli were found by the simplified technique, and the advantages both as regards cleanliness and time are obvious.

A CASE OF LYMPHADENOMA WITH PERIODIC PYREXIA

("PEL-EBSTEIN DISEASE").

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I AM encouraged to publish this case, not because I am in a position to contribute any new ideas, but because I think its publication will serve some purpose in drawing attention to a condition which, though well recognised, is comparatively rarely encountered and which offers some points of interest in diagnosis. I venture to think, also, that this case is an exceptionally striking example and in many respects more typical than those which have been previously described.

Cases Reported by Other Observers.

Sir Frederick Taylor contributed a very complete and exceedingly interesting account of "the chronic relapsing pyrexia of Hodgkin's disease."[1] His article included a reference to the previous literature on the subject, a reference which I have found of the greatest value in enabling me to trace the original descriptions by Pel, Ebstein, and others. His detailed description of these cases, together with a résumé of the types of pyrexia which are encountered, I shall briefly epitomise before referring to the case I have myself had the opportunity to observe.

Sir Frederick Taylor points out that the following types of fever may be encountered in cases of lymphadenoma: (1) A continuous pyrexia with slight diurnal variations. (2) Alternating periods of pyrexia and normal temperature. (3) Daily variations of temperature (in excess of the normal physiological limits) which are higher in the evening than in the morning. (4) Mixed types. Cases exhibiting at different times temperature phenomena corresponding to more than one of the above-mentioned types.

Ebstein published a paper entitled, "Chronic Relapsing Fever, a New Infectious Disease."[2] He first gave a detailed description of the clinical peculiarities of the case and afterwards its termination with the condition found at autopsy. His case was under observation for 238 days, during which there occurred 10 attacks of pyrexia, each of 13–14 days' duration, with apyrexial intervals of 10–11 days. An eleventh attack was of longer duration and was followed shortly before death by a brief twelfth attack. During life an enlarged spleen was identified, but no abnormal appearances in the blood and no enlargement of external lymphatic glands were observed. At the autopsy there were discovered enlarged bronchial, mediastinal, and mesenteric glands, as well as nodules of lymphoid appearance in the lungs, liver, kidneys, and spleen. Both liver and spleen were substantially enlarged and both exhibited infarcts.

Pel's case was described actually two years before Ebstein's publication. He referred to his case under the title "Pseudoleukæmia or Chronic Relapsing Fever?" At that time the association of pyrexia with Hodgkin's disease was unknown. Again, in Pel's patient, as in Ebstein's no enlarged external glands were evident, although hyperplasia of the spleen, retroperitoneal, mesenteric, and bronchial glands was found post mortem. Pel's idea was that the exacerbations of fever were produced by solid food, a view which nobody else has supported, and one, indeed, which observation appears completely to refute.

The Author's Case.

The patient whom I have had the opportunity to investigate was a boy 17 years of age. (It appears from Taylor's account that this pyrexial variety of lymphadenoma is more frequent under than over 20.) There was no history of any antecedent illness, and he was admitted on Oct. 3rd, 1918, with "influenza." At that time the hospital was inundated with cases of pyrexia, all of which, very naturally at that time of epidemic, were, in the absence of any distinctive features, labelled, provisionally at any rate, influenza; and although it is probable that on his admission the disease from which he was suffering *was* a mild attack of influenza, no particular attention was attracted or directed to anything which might have suggested the subsequent diagnosis. He was sent to a convalescent hospital on Oct. 15th, and 28 days later he was returned with a history of attacks of pyrexia and malaise, of greatly enlarged spleen, and of doubtful signs of fluid in the left side of the chest. On his arrival he complained of no symptoms, his temperature was subnormal, no physical signs were present, but the spleen was very definitely enlarged and extended three fingers' breadth below the costal margin.

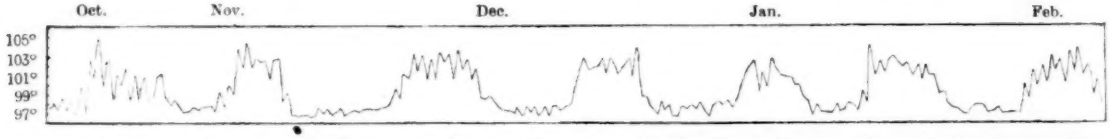
Three days later the spleen was quite impalpable, and in the absence of any other explanation it was thought that the patient was now convalescent from what was a fever of the typhoid group. But on the 22nd there was a recrudescence of pyrexia and malaise, with gradual but rapid enlargement of the spleen. Pathological investigations instituted at this time gave the following results:—

Total leucocyte count, 1560 per c.mm. Differential count: polymorphonuclears (per cent.) 47, lymphocytes 39, large monocytes 12, eosinophiles 1, mast cells 1. Erythrocytes, 2,675,000 per c.mm. Hæmoglobin, 52 per cent. Blood film showed anachromasia of red cells; otherwise nil abnormal. Urine nil. Blood culture negative. It will be observed that resemblance to typhoid fever is again manifest in the leucopenia.

Apart from the enlarged spleen no abnormalities were ascertainable; there was no trace of enlarged lymphatic glands. It will be remembered that these negative findings were characteristic in the cases described by Ebstein and Pel.

Remarks.

Many chronic infections are capable of producing an irregular sort of fever. "Anomalous typhoid," "anomalous influenza," tuberculosis, Malta fever, were all specifically excluded. It may be added that the picture of true relapsing fever differs from that of the condition described, in that the periods of pyrexia terminate suddenly by an unmistakable crisis, quite apart, of course, from the unequivocal evidence afforded by the spirilla in the blood. Cases of lymphadenoma without any enlarged external glands are sufficiently rare to excuse the failure to diagnose the patient's illness earlier, but once the condition has been recognised it may be said that the occurrence of such periods of pyrexia with corresponding periods of enlargement of the spleen afford a most characteristic picture.



Osler, in referring to this disease, says:—

"In a few rare instances (of lymphadenoma) Pel has described remarkable periods of fever of 10 to 14 days' duration, alternating with intervals of complete apyrexia. They occurred in two of my cases. Ebstein described it as a form of chronic recurring fever. It is probably due to an intercurrent infection."

The last suggestion would appear to be indisputable, and, bearing in mind the character of the pyrexia, one would suspect the parasite to be of a protozoal character. So far as I am aware, no supposed infective agent has been identified. During one pyrexial period of the present case the spleen was punctured and the blood extracted examined bacteriologically, but with negative result.

Little further description of the case is necessary. As will be seen from the chart, a remarkable regularity of periods of pyrexia and apyrexia was on the whole sustained, although the apyrexial intervals were on two occasions only one-half the usual duration. During each period of fever the spleen increased in size, although not to so great an extent in the last periods observed as in the earlier intervals.

[1] Guy's Hospital Reports, 1906, vol. lx.
[2] Berl. Klin. Woch., 1887, vol. xxiv., pp. 565 and 837.

During the apyrexial phases the patient always felt quite well and walked about, taking ordinary diet, and regaining the four or five pounds' weight he had lost during the previous period of pyrexia. So far as I could estimate, his general condition on Feb. 15th was no worse than on his first admission to hospital. He was transferred in order to be nearer his home, and it is probable therefore that at some future date a further history of the progress of the case will be forthcoming.

I must express my gratitude to Lieutenant-Colonel W. Turner, C.M.G., R.A.M.C., O/C. Connaught Hospital, Aldershot, for permission to publish the notes of this case, and to Lieutenant-Colonel Herbert French, R.A.M.C., consulting physician to the Aldershot Command, to whom I am indebted for much valuable advice in the investigation thereof.

THE RELATION OF GRAVES'S DISEASE TO DIABETES AND GLYCOSURIA.

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A NUMBER of interesting facts indicate the relation of Graves's disease to diabetes mellitus and glycosuria. Many writers have drawn attention to this relationship. In this paper, however, I do not propose to refer to interesting articles already published on the subject, but shall briefly refer to cases in my own practice which illustrate this relation from the clinical side.

1. Graves's disease is occasionally followed by, or associated with, diabetes mellitus, well marked or mild.

(*a*) Graves's disease followed by *severe* diabetes mellitus.

CASE 1.—Mrs. A. H., aged 47. Seven years before she came under my observation she had suffered from a very severe mental shock. Her husband's hand was torn off in an accident at his workshop. The patient was greatly shocked on hearing of the accident, and the mental distress was very soon followed by symptoms of Graves's disease. For some time these were severe; then she improved slowly; but about six years after the shock thirst and symptoms of diabetes were noted, the symptoms of Graves's disease having persisted.

When admitted into hospital under my care definite symptoms of Graves's disease could still be detected, though they were not very marked (exophthalmos, tachycardia, pulse 120 to 130, thyroid slightly enlarged, and fine tremor of hands). Symptoms of diabetes mellitus of medium severity were also detected. She was under my care in hospital for three months and was treated for diabetes, which was the prominent affection. The sugar in the urine was estimated daily. The daily amount of urine during this period varied from 80 to 140 ounces, but sometimes it was more than the latter figure; sp. gr. 1030 to 1040; sugar 18 to 30 gr. to the ounce (about 4 to 6·5 per cent.), total amount of sugar in 24 hours 1500 to 2000 gr. In course of time the urine gave a deep reaction with ferric chloride for diacetic acid; then albumin was detected in the urine, and finally casts. Death occurred from a sudden attack of hemiplegia.

CASE 2.—Mrs. J., aged 39. Suffered from Graves's disease at the age of 21; goitre, palpitation, and other symptoms well marked. Suffered for four years from these severe symptoms (seen by the writer at that time). Then recovered practically from Graves's disease, but suffered long from attacks of asthma. At the age of 35 diabetes detected. At the age of 39 seen by writer again. Marked diabetes; diacetic acid also found in urine in large quantity. No goitre, pulse 108; only slight prominence of eyeballs; no tremor.

CASE 3.—Mrs. M., age 41. Symptoms of Graves's disease developed at the age of 17, and continued until the age of 30. Then practical recovery occurred. At the age of 40 symptoms of diabetes developed and eyeballs became again prominent. When seen by writer at the age of 41 the symptoms and urinary condition were those of severe diabetes; also, the eyeballs were prominent and the pulse rapid, 104, but the thyroid was not enlarged.

(*b*) Graves's disease followed by *mild* diabetes mellitus (or persistent glycosuria).

CASE 4.—Male, aged 39. At age of 34 Graves's disease developed after a period of excessive mental work. Palpitation, exophthalmos, tremor, and thyroid enlargement developed. A trace of sugar was detected in the urine for a time. After careful treatment the symptoms of Graves's disease gradually diminished, and the urine became quite free from sugar. Two years later, at the age of 36, he began to suffer again from severe palpitation and was obliged to discontinue all work. Three years later, at the age of 39, a trace of sugar was again detected in the urine; but a month later the urine was free from sugar. A month afterwards sugar was again detected, and the glycosuria continued. The condition developed into one of mild diabetes mellitus or persistent chronic glycosuria, the urine always containing sugar. (Urine 60 oz. daily, later 90 oz., sp. gr. 1018, considerable amount of sugar, no albumin, no diacetic acid.) The patient lost weight very much. He became nervous and excitable; pulse 120; no thyroid enlargement; eyes not prominent, but Stellwag's and von Graefe's signs, and slight tremor of hands detected. After 8 months the urine became quite free from sugar; and he gained flesh. No exophthalmos could be detected, the thyroid was practically normal, pulse 96, no tremor. With exception of insomnia he was practically well.

CASE 5.—Middle aged man, goitre well marked. Marked palpitation, and exophthalmos; persistent glycosuria. No other diabetic symptoms.

CASE 6.—Young man; typical symptoms of Graves's disease; persistent glycosuria; no other diabetic symptoms.

2. In Graves's disease frequently a temporary or intermittent slight glycosuria can be detected. This fact is well known, and examples need not be given.

3. Mild diabetes is, in rare instances, *followed* by Graves's disease; such cases are extremely rare. C. Grube has recorded the case of a patient who was greatly shocked by hearing that her urine contained sugar. The amount was only small, but the mental shock was great owing to the fact that a relative had died of diabetes. In a very short time Graves's disease developed and steadily advanced and proved fatal.

4. *Graves's disease and alimentary glycosuria.*—In Graves's disease alimentary glycosuria is often produced much more readily than in health by the administration of a large quantity of sugar. In some cases of Graves's disease glycosuria is produced by 20 or 30 g. of grape sugar, whilst in others 100 g. are required to produce this effect. (In healthy persons 180 to 250 g. of grape sugar are required to produce alimentary glycosuria—v. Noorden.)

5. Both Graves's disease and diabetes mellitus occasionally develop directly after a sudden *mental shock*, or after great *mental anxiety* of short or long duration.

Thus in Case 1 recorded in this article symptoms of Graves's disease developed in a female after the mental shock of hearing her husband's hand had been torn off in an accident at his work. In another of my cases the symptoms of Graves's disease developed in a young female directly after the great mental shock caused by seeing a boy knocked down in the street by a motor-car. In a third case they followed the mental shock caused by the capsizing of a small boat in which the patient was rowing on a river. In another instance I was called to see a man who was dying of acute pneumonia. At that time his daughter was apparently not suffering from any illness. The man died next day. The shock to the daughter was very great and she began to suffer from severe palpitation. The symptoms increased rapidly and a month after the father's death I was called to see the daughter, and found her to be then suffering from marked Graves's disease.

Probably in these cases the mental shock was the last factor, or exciting cause, in the development of the disease in individuals whose nervous system was already in some way abnormal.

In diabetes mellitus we also sometimes find that the disease has developed directly after a sudden mental shock. I have recorded a number of striking instances.[1]

Amongst discharged soldiers we now find many cases of Graves's disease, and my own impression is that the number of cases of Graves's disease amongst discharged soldiers is much greater than the number of cases amongst men in civil life before the war.

As regards diabetes mellitus, however, I am inclined to think that this disease is certainly not more common in discharged soldiers than amongst the male civil population of military age before the war. These are, however, only general impressions and not based on statistics.

6. *Family history of diabetes in cases of Graves's disease.*—Occasionally the history shows that the two diseases have occurred in different members of the same family. If we take the family history in cases of diabetes we occasionally find that one or more relatives have suffered from Graves's disease, and if we take the family history in cases of Graves's disease we occasionally find that one or more relatives have suffered from diabetes mellitus. The following are a few examples:—

1. Mrs. S. consulted me on account of diabetes mellitus. One daughter had died of diabetes mellitus four years previously. Another daughter developed Graves's disease afterwards. The daughter of the brother of Mrs. S. suffers from Graves's disease. The brother of the husband of Mrs. S. suffers from diabetes mellitus.

2. Male; severe diabetes mellitus. Sister suffers from Graves's disease.

3. Female; Graves's disease. Mother suffered from diabetes.

4. Female; Graves's disease. Father, one brother, and a cousin all suffering from diabetes mellitus.

5. Female; Graves's disease. Mother and one brother suffer from diabetes mellitus.

6. Girl, aged 6; diabetes mellitus. Father's brother and father's cousin suffered from diabetes mellitus. Another cousin of father suffered from Graves's disease.

7. Female; Graves's disease. Father and mother, mother's sister, and mother's father all suffered from diabetes.

Many other points of interest respecting the relation of the two diseases, based on experimental work, might be added; but in this note I desire to refer only to the clinical

[1] Brit. Med. Jour., Feb. 2nd, 1918, and book on "Diabetes Mellitus and its Treatment." Lond. and Edin. 1898.

facts. As von Noorden states with reference to the action of the thyroid gland and the pancreas:—

"Here we are in no doubt whatever. The thyroid and pancreas have antagonistic actions, the former inhibits the excitability of the latter. The more powerful the action of the thyroid the more marked the inhibition."[2]

The recovery from Graves's disease or the marked improvement in the symptoms, followed by the development of diabetes, and the other facts mentioned in this article, also raise the question as to the possibility of both of these diseases, in *certain cases*, being due to fine changes in the nervous system (? medulla)—changes which, by vaso-motor or other influence, at one time produce Graves's disease by altering the thyroid activity, and at another time, by extension to adjacent parts of the central nervous system, alter the activity of the pancreas.

7. *Graves's disease and acetonæmia.*—In Graves's disease occasionally the patient suffers from nausea, sickness, and persistent vomiting, and may be unable to take food and may rapidly become very wasted. In some of these cases we find a marked diacetic acid reaction in the urine (claret coloration with perchloride of iron), though the urine is free from sugar. The condition resembles the acetonæmia of diabetic coma in many respects. (A similar acetonæmia, apart from diabetes, is occasionally observed in cases of persistent vomiting from gastric affections and in a number of other affections.)

Remarks on Treatment.

The occasional development of diabetes after Graves's disease, and the frequent occurrence of temporary or intermittent glycosuria in this disease, are facts which should be considered in the treatment. I think it is advisable in the treatment of all cases of Graves's disease to discontinue the addition of sugar to food and drinks, and also to avoid foods and drinks which contain much sugar. These precautions are especially desirable and sugar and sweet food should be cut off entirely if glycosuria, temporary or intermittent, has ever been detected. Not infrequently in the treatment of Graves's disease nitrogenous foods are restricted or cut off, and a diet chiefly of non-nitrogenous food is given; but if such a diet is advised I think it desirable that the *sugar* carbohydrates should be much restricted, as just stated.

If glycosuria is frequent or permanent then a diet chiefly of *starchy* carbohydrate food is unsuitable in such cases of Graves's disease. In definite diabetes, associated with or following Graves's disease, of course the diet suitable for the form of diabetes detected should be advised, as the diabetes is usually more serious than the Graves's disease.

To these statements one exception may be mentioned. In cases of Graves's disease complicated with persistent vomiting, with acetonæmia, and with diacetic acid in the urine, if no glycosuria is detected *sugar* carbohydrates, such as sweet fruit, tinned apricots, and syrup of such tinned fruits, may be of much service for a *short time*, along with alkalies (citrate of soda or potash, or bicarbonate of soda in large doses). I have found such treatment followed by sudden marked improvement in the condition just named when vomiting has been most persistent, obstinate, and serious.

Many cases of Graves's disease, especially incompletely developed forms, are now met with amongst demobilised soldiers, and the points just mentioned, as regards diet, are worth bearing in mind with respect to the prevention of diabetes or glycosuria as a complication, or at a later date.

[2] New Aspects of Diabetes. By Professor von Noorden. Bristol, 1912, p. 59.

MEANS TO AVERT MENTAL COLLAPSE.—Dr. M. J. Nolan, in the forty-ninth annual report of the Down District Lunatic Asylum (of which he is resident medical superintendent), pays a tribute—probably the first of its kind or, indeed, of any kind—to the out-of-work or unemployment donation. While admitting it was not without evil results in other directions, he thinks it undoubtedly operated to save many deserving individuals from complete mental collapse arising from anxiety about the future, following a long period of stress. The rate of admission to the Down District Lunatic Asylum has fallen, the total population of which in 1918 was 714, with an admission of 105 (53 men and 52 women).

CHOLERA OF THE SHEEP

(JAUNDICE; YELLOWS OR YELLOWSES; HEADGRIT OR PLOCACH).

BY J. P. McGOWAN, M.A., M.D., B.SC., M.R.C.P EDIN.

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THE epizootic and enzootic disease of sheep dealt with in this preliminary article is recognised throughout Scotland, under the various synonyms given above, during the months of August and September usually. It affects lambs of the year usually, that is to say, when they are about six months old. The names "jaundice," "yellows," and "yellowses" are derived from jaundice being present in some cases, whilst "headgrit" refers to a swollen condition of the head in the parotid region, also occurring in certain cases. The term "plocach" is Gaelic and is synonymous with headgrit, meaning, as it does, "big head" or swollen head. The designation of the disease by the name of cholera is a proposal of my own, justifiable, in my opinion, as will be seen later, by the frequency of choleraic symptoms. That the disease has not before this been designated by farmers and shepherds with a name indicative of these important symptoms may in part be explained later.

Account of the Disease by a Farmer.

I had my attention first drawn to this condition in September, 1915, by the receipt of a letter from a farmer in whose flock the disease was markedly present. This letter may form a fitting introduction to a discussion of the natural history of the condition and is quoted in full. Under the date of Sept. 9th, 1915, he writes as follows:—

"From August 12th up to the present date I have lost 61 lambs with the disease. In only one or two cases was the death sudden. Most of the lambs after being noticed ill, linger for some days, and in some cases longer, on to a fortnight. I have one or two which have lived on for three weeks.

Most of them start with a scour and in a day or two shrink to nothing. They just hang about, and if water is available drink constantly. If they are unable to get to water they hang about the hedges with nose down and very dull, lie down for a few minutes and then up again. Some of them emit a grunt when breathing. Others of them froth at the mouth, but the froth is not blood-stained. They also dribble saliva from the mouth when they can get water.

Most of them that I have seen skinned and opened have a lot of water in the stomach and intestines, while their skin is glued to their flesh and very difficult to take off. When one of the ailing sheep is caught hold of, you can hear the water jumbling about inside.

On opening them we have found, as a rule, the fourth stomach and the gut proceeding from it much congested and discoloured, and in most of them a gritty stuff like the husks of cotton cake and sand mixed (no great quantity, however). The other stomachs are mostly quite natural. In one or two cases we found the first and second stomachs compacted with dry, hard fæces. There seems to be no food in the bowels, only a greenish-yellow water.

Their livers are, as a rule, all right, but in one or two cases they are much inflamed and brittle. The kidneys seem all right and are quite firm. Diaphragm is often inflamed and dry. There is no water or fluid in the chest. The heart is natural and the pericardium contains no excess of fluid. Lungs in most cases (all I have seen) are much inflamed and discoloured (one, however, finds this often in cases of illness which hang on for some time).

We have had a good few yellowsed sheep (with jaundice, swollen head, and loss of ears) this season, and they are by no means immune. Also many of those dying are affected with 'orf' (lip and leg evil).

The cases look to me more like poisoning of some sort. The whole of the sheep have had a biggish check, not only those which have died or are ill, and I cannot conceive how they have got the check, as the treatment has been good all along.

The grass this year is very rank, but when most of the cases occurred it was a clean hay foggage. We have some cases from a field which was 'haimed' for a bit, and this field is very rank and a bit 'tathy,' but nothing to complain of. The lambs on this grass are getting tares laid down to them. Those on the fog are being run off at nights on to an old grass field and are now getting turnips."

At the request of the owner I visited the flock on Sept. 17th and was able to confirm the substantial

accuracy of his observations as just given. I ascertained further from the shepherd that the affected animals "squirted out" the fluid bowel contents. There were two lots of lambs on the farm. The worst affected lot was on a field with very rank foggage; the lot that had practically no cases was on a better pasture, inasmuch as it consisted more largely of clover. Several of the surrounding farms were affected with the disease.

Summary Account of the Disease.

The facts thus ascertained with regard to the disease may be shortly summarised as follows. It is an epizootic disease affecting lambs during the months of August and September. Affected animals in the fatal cases live for a period varying from a few days up to a fortnight or three weeks. The disease commences with a colliquative diarrhœa, and in a few days the animals shrink markedly in size. The disease is characterised by great thirst. Jaundice and headgrit cases and cases with loss of ears are occurring at the same time, and these cases are affected with this same diarrhœa. There is marked dryness of all the tissues of the body on post-mortem examination; the intestinal tract, however, is empty of food and is full of a large quantity of a greenish-yellow watery fluid, which can be detected during the life of the animal by its "jumbling." There is marked inflammation of the fourth stomach and duodenum. The fact of the whole of the lambs, apart from those obviously ailing, having received a bad check would seem to indicate that there were a large number of them suffering from the disease in a milder and not so noticeable form. It is a disease with a high mortality at times and can cause great financial loss to the owner.

Post-mortem Findings.

On the occasion of my visit time and circumstances did not permit of me doing an exhaustive series of post mortems and on account of various factors I had not an opportunity of revisiting the farm during the continuance of the disease. I performed, however, two post mortems, one on an acute case and the other on a chronic case, and the record of these cases are as follows:—

Lamb 1.—This lamb was seen ill for the first time on the preceding night. On examination copious colliquative diarrhœa was present; very dull and listless; temperature in rectum 105° F. Killed by bleeding from throat. It was in fairly good condition. There was no gangrene of ears, no swelling of parotid region, no jaundice. No discharge from nose, no frothing at mouth; no hæmorrhages subcutaneously or in muscles. The lungs were healthy; no effusion into pericardium. Heart healthy, including valves; no myocardial hæmorrhages. The liver was apparently healthy; no flukes; gall-bladder very large and very full of green bile. The kidneys, spleen, pancreas, and bladder were apparently healthy. The first stomach contained a quantity of moist grass; the fourth stomach was inflamed and contained a little clear watery fluid, but no food; duodenum was markedly inflamed. In jejunum, ileum, cæcum, colon, &c., no evidence of inflammation. The whole intestinal tract from the duodenum to the rectum was filled with a greenish fluid devoid of solid matter. No round worms or tapeworms were found. The mesenteric glands were not enlarged or congested. When this animal was lifted up prior to being killed the jumbling of the intestinal contents was distinctly heard and felt.

Lamb 2.—This case, a chronic one, dated from the onset of the disease in the flock about August 19th. It appeared to be getting better slowly, but latterly became very emaciated and dwindled to a shadow. When seen the emaciated condition was noted, as also that the animal was suffering from diarrhœa. There was no evidence of difficulty of breathing; its temperature was not taken. It was killed by bleeding from the neck. There was no gangrene of ears, no swelling of parotid region, and no jaundice. No discharge from nose and no frothing at mouth; no hæmorrhages subcutaneously or in muscles. The lungs and heart were perfectly healthy except for a few worm nodules in lung. There was no enlargement or congestion of the lymphatic glands anywhere. The liver was much enlarged and very fatty. Gall-bladder was much distended, and contained a golden-yellow watery fluid; turbid with particulate material. The wall of the gall-bladder was thickened, and its lining membrane inflamed. No flukes in the liver or bile passages. The spleen, kidneys, pancreas, and urinary bladder appeared healthy. The first, second, and third stomachs contained moist grass; fourth stomach congested and contained a watery fluid. The duodenum showed an intense hæmorrhagic inflammation with a diphtheritic exudate on its surface. No apparent congestion of the ileum, cæcum, colon, rectum. The contents of the intestine were greenish and watery, containing slightly more solids than was the case in Lamb 1. There were a few whip-worms in the cæcum; no other round worms or tapeworms found.

The points to be specially noted are with regard to the acute case, the watery contents of the intestine, and the inflamed nature of the duodenum. In the more chronic case attention may be drawn to the character of the intestinal contents, to the condition of the duodenum, liver, and gall-bladder, and to the emaciated condition of the animal.

Bacteriology.

Facilities for an extensive bacteriological examination, under the circumstances, were not good and I confined myself to doing a little, and, if possible, doing it well. With the idea that the acute case would be the most likely to contain the cause of the disease, I ligatured a portion of the duodenum and removed it to the laboratory in a sterile bottle. Suspecting that the conditions found in the more chronic case might be caused by secondary invaders I contented myself with making a careful naked-eye examination of the specimens. As the sequel will show, portions from the liver for histological and the contents of the gall-bladder for bacteriological examination might have been of great service in helping to elucidate the condition further.

Before proceeding to record the experimental results obtained with the material removed from Lamb 1, it might be well here to deal with any literature bearing on the subject. There are many references scattered through the books dealing with such conditions as jaundice, but the only notice which I can find bearing indubitably on the disease entity described above occurs in May's book on the sheep.[1] Under the names acute jaundice, hepatitis, the bile condition, bile fever, he describes a disease which, he states, had occurred very seldom in Germany, but had often been observed as an enzootic in France and Holland. He mentions fever as being a symptom of the disease, and, of course, jaundice. He lays stress on the swelling of the head, but although he mentions colliquative diarrhœa as being very obvious at one stage of the disease, he does not emphasise it. Indeed, he rather emphasises a constipative stage of the disease. More will be said on this point when we come to deal further on with a disease which he calls cholera of the sheep.

Results of Bacteriological Investigation.

I now proceed to detail briefly the results obtained with the material derived from the duodenum of Lamb 1. The contents of the duodenum were diluted in peptone water and plated out on MacConkey lactose-agar. After 24 hours' incubation the plates were seen to contain two types, and two types only, of organisms—namely, a non-lactose fermenter which I shall call B, and a lactose fermenter which I shall call A. Four colonies of the A type were picked off and six of the B type. Both were Gram-negative coliform bacilli, both were slightly motile, while the reaction of the two organisms on various media may be given in tabular form as follows:—

—	(A)	(B)	—	(A)	(B)	—	(A)	(B)
Lactose.	A G	0	Litmus milk.	A C	A	Salicin.	A G	A G
Dulcite.	A g	A G	Glucose.	A G	A G	Inulin.	0	0
Saccharose.	A G	0	Mannite.	A G	A G	Galactose.	A G	A G
Raffinose.	A G	0	Maltose.	A G	A G	Gelatin.	Growth*	
Sorbite.	A G	0	Dextrin.	A g	A g	Peptone water.†	Present.	

A = acid formation; G = gas formation; g = small amount of gas formation; C = clot formation; 0 = no change.
* No liquefaction. † Indol formation.

It will be seen that type A organism is a lactose fermenter of advanced *B. coli* type, while type A organism is a paratyphoid-like organism. In papers about to be published I am submitting evidence which goes to show that type B organism can, and does, mutate into type A organism; that these two organisms, for all practical purposes, are one and the same; and that in consequence the infection of the duodenum in this case was a pure infection with one organism *only*. The further experimental results, however, recorded in this paper are to be regarded as pertaining only to type B organisms, with which the experiments were performed, although a fair number of experiments have been performed by me with type A organism with results differing, if they differ at all, quantitatively not qualitatively.

Animal Experiments.

The next question to be decided was whether the disease described above could be produced in animals.

Sheep were not available, consequently rabbits were used; and as infection of rabbits with other pathogenic organisms of an intestinal type, such as typhoid, had markedly failed when the organisms were administered by the mouth, the cultures here were given intravenously through the ear vein. When the organism was administered thus—speaking always of the non-lactose fermenter—it was seen to be very lethal, and a minimal lethal dose had to be established for working purposes. Working with a sublethal dose, 16 experiments on rabbits were performed, and the clinical symptoms observed, and the pathological and bacteriological findings obtained at various intervals subsequent to injection, will now be briefly described.

With regard to the symptoms produced, the animal became very ill about an hour after injection, and a profuse colliquative diarrhœa commenced which lasted for about 48 hours. Subsequent to this the fæces became oat-shaped, small in size, dark in colour, hard in consistence, and covered in some cases with mucus and blood. A few cases recovered after this, but in most cases the fæces continued more or less of this nature, the animal refused its food, became more and more emaciated, and died, in the more prolonged cases, in three to four weeks.

When an animal was killed after 48 hours the contents of the intestine were observed to be entirely fluid, and there were no fæcal pellets in the rectum; the duodenum was markedly inflamed; there were hæmorrhages throughout the liver, and the gall-bladder was distended with pure blood. Pure cultures of the organism injected, without any contamination, were obtained in all such cases from the gall-bladder and duodenum.

If the animal were killed at a later period—say, from a week to three to four weeks after injection—the intestinal and duodenal changes were not so noticeable, the extreme emaciation was very marked, and changes in the liver and gall-bladder were pre-eminent. Thus in some cases there was acute necrosis of a whole lobule of the liver, while in cases not so marked as this there was evidence of a fibrosis round the small bile-ducts, a small-celled infiltration, a fibrosis, and proliferation of the bile capillaries in the portal spaces.* The gall-bladder showed small-celled infiltration of the submucosa (and in one case ulceration) and fibrous thickening of the walls. The common bile-duct and cystic duct in one case were greatly thickened and greatly dilated. The contents of the gall-bladder, instead of being green and viscid as in the normal condition, were watery-like and turbid, with a white sediment, which in some cases suggested calculus formation.

A pure uncontaminated growth of the organism injected was obtained from the gall-bladder in these cases; in one case after the lapse of four weeks. In all these cases, too, a pure uncontaminated culture of the injected organism was also obtained from the duodenum.

This is a remarkable result, not because the organism was obtained, for the gall-bladder would act as a supply reservoir, but because it was obtained *uncontaminated*, considering that food, containing organisms of all sorts, was being eaten all the time. Certain other observations which I made during the course of the experiment would support the view deducible from this that normally the contents of the duodenum are sterile, at least, as far as growth on MacConkey lactose agar is concerned. On several occasions I made cultures from the duodenums of healthy rabbits, killed for other purposes, and found them sterile. The bile may act as an antiseptic for various organisms, but this can hardly be the case for coliform organisms.

It is to be noted that none of the experimental animals developed jaundice, swelling of the parotid, or gangrene of the ears. This is not surprising, considering the comparative rarity of these conditions in the natural disease among sheep.

A few experiments were performed by me relative to the protective value of a previous intravenous injection, to a similar subsequent inoculation of a much larger dose. The experiments are few in number, but they go to show that a protection is developed in this way. Thus, rabbits so treated withstood a subsequent intravenous injection of three to six times the original dose (which was just a subminimal lethal one) and showed practically no symptoms.

Provisional Results of Inquiry.

One may provisionally here sum up the finding so far in connexion with the disease. It would appear that the disease in the sheep is primarily a duodenitis characterised by a marked colliquative diarrhœa and which has as sequelæ the production of jaundice, swelling in the parotid region, and local gangrene of the ears. Evidence has been adduced by me from the bacteriological examination of the sheep and from experimental work on rabbits, that a bacillus of the paratyphoid group has strong claims to be considered as causal. This work, of course, will have to be, and is being as opportunity arises, extended especially in the direction of further examination of diseased sheep, the production of the disease in healthy sheep with the organism in question, and the development of further prophylactic measures, vaccinal and otherwise.

Comparison of Certain Symptoms in Cholera in Man.

I have already alluded in passing to the resemblance of this disease to cholera in human beings. I was so struck with the marked resemblance of the colliquative diarrhœa of this disease to that of cholera, that I began to investigate whether the other symptoms observable in this disease had been recorded in the case of cholera.

In this connexion it is interesting to note that authorities on the subject, such as Manson [2] and Leonard Rogers,[3] state that jaundice, parotitis, and gangrene of extremities, such as the nose, the penis, the scrotum, the fingers, and toes, &c., are among the sequelæ of cholera in the human subject.

Further, Greig, in a series of papers,[4 5 6] has brought to light many facts in relation to the pathology of the liver in cholera. He quotes Kutescha as having examined post mortem 109 cholera cases and found the cholera vibrio in the gall-bladder of 49 cases, while in 10 per cent. of these 49 cases its presence was associated with marked pathological changes in the biliary passages. Again, he quotes Bruloff as having found the cholera vibrio in the gall-bladder of 76 per cent. of his cases. Greig himself, in an examination of 271 fatal cases of cholera, found the cholera vibrio in the gall-bladder of 80, and associated with distinct pathological changes in 12 out of these 80 cases. His histological findings in the gall-bladder and liver in these cases, as also in the gall-bladders and livers of his experimental rabbits which he injected intravenously with the cholera vibrio, are practically identical with what I have described above in this disease.

The further point from a pathological point of view in the comparison of the two diseases is that cholera is primarily a duodenitis (Leonard Rogers, loc. cit.). This raises the further interesting question of the cause of the colliquative diarrhœa in the two cases.

Causation of the Colliquative Diarrhœa.

It may be due to the same or a similar specific cathartic toxin in the two causal organisms, but it seems to me that it is more likely that it is due to a toxin (much less specifically and drastically cathartic and which occurs in very many intestinal organisms besides the two mentioned), acting on a *specific locus* of the intestinal tract. The emphasis of the specificity is rather on this locus—the duodenum—than on the toxin.

I have had in progress, though the progress has been interrupted latterly, since 1915 some experiments on the pharmacological action of emulsions of various intestinal pathogenic organisms, such as typhoid, paratyphoid, the dysenteries, &c. The organisms were killed by heat and the emulsions so prepared were injected intravenously into rabbits. In every case tested, with the exception of Shiga's dysentery bacillus, colliquative diarrhœa was produced, and post mortem the duodenum was found to be markedly congested and dotted over with hæmorrhages. No diarrhœa and no duodenal change was produced, however, when these emulsions were injected subcutaneously or intraperitoneally. Catharsis, again, is not produced by the subcutaneous injection of *V. choleræ* (Manson).

My reading of these results is that the toxic material was excreted by the bile and, arriving at the duodenum first, exerted its action there and produced what one may call the duodenal result—namely, colliquative diarrhœa. That this same result is produced in cholera and in the disease we are dealing with here, in my opinion, is due to the fact that their causal organisms grow in the duodenum and produce their effects from there; while the fact that colliquative diarrhœa, which is absent in the natural diseases such as typhoid, can yet be produced on intravenous injection of the

* The details of the changes are at present the subject of further investigation by Professor Beattie and myself.

causal organisms, to my mind is explained similarly, in that the site of growth of these organisms in the natural disease is not the duodenum, but farther down.

Other evidence of a specific duodenal action lies in the fact that in both the diseases we are dealing with here, cholera and the sheep disease, parotitis is a marked sequel, while in medicine generally it has long been recognised that various grave affections of the duodenum give rise to parotitis. It is highly speculative, of course, but it is permissible to wonder if mumps may not primarily be a duodenal affection.

The Overlooking in the Disease of the Diarrhœa.

The next point I will deal with is the question as to how the diarrhœa so evident in the disease has up to the present time been overlooked.

May describes at another part of his book (p. 31) as an entirely different disease a condition in sheep which he calls "the cholera-like disease of sheep." He himself had not seen the disease, and he is quoting from an article in the *Journal de Médecine de Bruxelles*, September, 1854. The disease was a very fatal one and was characterised by colliquative diarrhœa and swelling of the parotid glands. The European epidemic of cholera, 1851–55, was raging at the time, and the writer of the article, a Dr. Liegen, suggested a relation between the two conditions.

Now diarrhœa in sheep is almost, one might say, an everyday occurrence, even although it may not be of a colliquative nature, and no special importance is attached to it by shepherds. Familiarity, however, with the diarrhœa of cholera, as happened in this case, and as might have happened in Scotland had cholera epidemics been more frequent, and had they synchronised, as in this case, with this disease in sheep, might have led shepherds and others to recognise more fully its exact nature and ascribe to it, by name or otherwise, the importance it undoubtedly has in a disease up to now designated only by its sequelæ.

Epidemic Jaundice.

In conclusion, a further point needs to be discussed. Attention has been drawn, owing to the war, to the prevalence of a type of jaundice among the Balkan troops.

Sarrhailé and Clunet,[7] in dealing with an epidemic of this sort, came to the conclusion that the epidemic of jaundice at Gallipoli was a manifestation of paratyphoid A fever; C. J. Martin[8] opposes this view on bacteriological grounds, and suggests, from histological examination of livers of affected cases, that the infectious jaundice of Gallipoli, although much milder, presented analogies to the severer form, Spirochætosis Ictero-hæmorrhagica, and believes that the symptomatology and morbid histology are consistent with the view that it is primarily a systemic infection. Hurst[9] and Wilcox[10] believe that the condition is of the nature of a catarrhal jaundice spreading from the duodenum.

Cantacuzène[11] describes the disease as it occurred in Roumania. It was of a very mild type, and in the rare cases which died there was fatty infiltration of the liver due, in his opinion, to primary angiocholitis of the intralobular biliary canaliculi. The search for spirochætes by the injection of guinea-pigs was negative. Blood culture was positive in one-third of the cases and yielded atypical paratyphoid bacilli resembling somewhat paratyphoid B. He records experimental production of the disease by people voluntarily swallowing cultures of the organism. He regards this organism as the cause of the disease.

Hatiegan,[12] in an outbreak of epidemic jaundice, obtained, with the duodenal sound, bile which showed in 65 per cent. of the cases on first examination a very actively motile bacillus which he thinks is the cause of the disease. Meyer[13] records an epidemic of jaundice in the Waziristan Field Force, and comes to the conclusion, on rather insufficient evidence it would appear, however, that an organism of the enteric group, probably closely allied to the paratyphoid, might be the causative agent.

The question of the cause of this disease cannot be said to be settled and, on the whole, the evidence so far adduced would appear to be against the disease being of the nature of a catarrhal jaundice.

In a previous paper[14] I suggested that head-grit might be a hæmorrhagic septicæmia manifestation. This I did because from the head of a lamb, sent in to me diagnosed as head-grit, I obtained a pure culture of the *B. bipolaris septicus*. As swelling of the head is also one of the marked symptoms of hæmorrhagic septicæmia I concluded that this was the nature of the disease in question here. Evidently the diagnosis, for which I was not responsible, as so often happens, though unavoidable under the circumstances, was wrong, and I was in consequence misled.

This paper was first submitted for publication six months ago.

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AURAL SUPPURATION IN EARLY CHILDHOOD:

ITS PREVENTION AND TREATMENT.

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IN every clinic devoted to the ear and throat diseases of childhood two affections command the attention to such an extent that all others fade into insignificance—viz., (1) tonsil-adenoid disease, and (2) middle-ear suppuration. 90 per cent. of the work comes under one or other of those headings. But while parents and practitioners are fully aware of the ill-effects wrought by lymphoid enlargements about the throat and of the improvement, often quite dramatic, which follows their removal, suppurating ears are apt to be overlooked and neglected.

Middle-ear suppuration is not in itself a fatal disease; indeed, the majority of cases tend towards natural cure, but it brings many evils in its train. The constant swallowing of septic material causes ill-health and sometimes enteritis, meningitis is not rare as a sequel of otitis, whilst the destruction and cicatrisation resulting from the inflammatory process may so damage the delicate ear mechanism as to lead to deafness, which to a young child commencing its education is a severe handicap. Even though the cure of an otitis in childhood appears complete, it is conceivable that some of the deafness of later life—for example, certain cases of otosclerosis—may be traceable to aural suppuration during early years.

Text-books give scant information on suppurative otitis media as it affects children. True, the disease in a child of school age may closely resemble the adult type, but a glance at the temporal bone of an infant suffices to show the extent to which pathology may be modified and altered by anatomy.

Anatomical Data.

If we look at the base of a fœtal skull, such as is used for obstetrical demonstrations, we see that the most prominent features, next to the foramen magnum, are the large tympanic membranes, lying almost horizontally. There is no osseous meatus, and the drum lies so obliquely as to be practically in the same continuous plane as the upper wall of the membranous meatus. The mastoid process, as the specimen shows, is as yet undeveloped, but the mastoid antrum is relatively large, is well drained by a roomy aditus, is close to the surface of the skull, and lies higher in relation to the middle ear than does the adult antrum. The Eustachian tube is relatively shorter, wider, and more horizontal than it is in the adult, so that it acts as a good drain, though, on the other hand, infection of the middle ear from the naso-pharynx is favoured. A final anatomical, or rather histological, fact of importance is the occasional presence in the middle ear or antrum of a network of embryonic tissue. Usually this completely disappears before birth, but at times it persists in the antrum or attic during the first few months of extra-uterine life, and in such cases the presence of so delicate and vulnerable a structure may render its possessor peculiarly liable to otitis media.

Otitis Media in the Infant.

As a matter of fact, aural suppuration occurs with extreme frequency during the first year of life. The results recorded

in various papers on the subject by eight different observers who examined the ears at a series of post-mortems on infants show that otitis was present, on an average, in 82 per cent. It has been doubted whether the presence of pus in the middle ear after death in so large a percentage of cases was really pathological. Indeed, Aschoff regarded it as a "foreign body" suppuration, resulting from the presence of vernix, meconium, &c., which had entered by way of the Eustachian tube. While this explanation may hold good for new-born infants, the pus has seldom been found sterile, and bacteriological investigations have only confirmed the extraordinary prevalence of the disease. Most of the cases yield the pneumococcus, while next in frequency comes the streptococcus, the latter giving rise to a more severe infection, sometimes complicated by mastoiditis.

The close connexion between otitis and pneumonia has often been remarked, and it is said that the middle ear is infected in every fatal case of infantile pneumonia. The commonest cause, however, of otitis in infants is the ordinary cold, which is a serious disease in early life. The nasal passage of a baby is easily blocked, feeding is rendered difficult, and infected secretions are readily forced into the middle ear.

Symptoms.—Among all the diseases of children probably none is so frequently overlooked as otitis media. Before the occurrence of perforation and consequent appearance of pus in the meatus the diagnosis is no easy matter.

The ears should be examined in all infants who suffer from fever of obscure causation. The temperature may be high, or it may not rise above 100°; and in the latter case, as Still has pointed out, it is apt to continue even after the inflammation has subsided. Pain, as evidenced by continuous crying, restlessness and sleeplessness, and boring of the head into the pillow are often noted, while the appearance of head-retraction, vomiting, and convulsions may lead one to suspect meningitis, until, with the occurrence of perforation, the true nature of the case is revealed. Pain is not constant, however, and may sometimes be altogether absent. In the average case the drum perforates in three or four days, with prompt relief of all symptoms. At first the pus is profuse, but later it becomes thin and scanty, and as a rule the ear is dry within two or three weeks.

Unfortunately, otoscopic examination does not always assist us to diagnose otitis prior to perforation. The tympanic membrane may, indeed, appear normal if the stress of the disease has fallen upon other parts of the middle ear, and such cases are very deceptive. On the other hand, a red and bulging drum will often betray the condition, though we must remember that in a crying infant the normal drum appears red. In examining the infant's ear remember the obliquity of the drum. The meatus is a mere slit, whose walls must be separated by pulling the auricle downwards. The use of a speculum with an obliquely cut end and a collar to give a good grip in manipulation may assist one to secure a glimpse of the drum, and a fleeting glimpse is often the best obtainable.

Considering the frequency of otitis in infants, mastoiditis is not a very common complication. When it does occur, the thin outer wall of the antrum breaks down, and a subperiosteal abscess forms above and behind the ear, causing considerable downward and forward displacement of the auricle.

Treatment.—In the early stages of otitis, dry heat and the use of the well-known cocaine, carbolic, and glycerine drops will relieve symptoms, but surgical treatment is more effective, and the small operation of paracentesis tympani might with advantage be performed more frequently. The incision should divide the posterior part of the drum from below upwards, and should be continued a little way along the inflamed meatal wall. General anæsthesia is advisable. The small clot which forms over the incision must be syringed out a few minutes later, as it is apt to impede drainage. Pus may not appear at once, but the flow will become established within a couple of days.

Tuberculosis of the Middle Ear.

This disease is not uncommon in the infant, though it becomes less and less frequent as age advances. In a series of 150 consecutive cases of chronic middle-ear suppuration in children under ten years of age attending the Royal Hospital for Sick Children, 13 cases were of definitely tuberculous origin. In all of the 13 cases save one, a child aged 3, the disease commenced during the first year of life.

As regards symptoms, all cases were characterised by a painless and gradual onset, and all showed enlarged glands around the ear. Facial paralysis was noted in 7 cases, while in 3 cases a mastoid abscess had formed and ruptured, causing a mastoid fistula.

The ætiology of aural tuberculosis is most important from a public health point of view, for there is little doubt that the infection is milk-borne and reaches the ear by way of the Eustachian tube. Ten of my patients were bottle-fed, and only in one instance was the milk boiled.

The treatment of the condition consists in a very radical mastoid operation. This was carried out in 9 cases, in all of which extensive bone necrosis was found, and microscopic examination of the granulations confirmed the diagnosis. Six did well and 3 died, one of meningitis a week after operation, and the other two several months later, of pneumonia and convulsions respectively.

Otitis Media in Older Children.

Let us now consider the problem of aural suppuration in older children. At the age of 2 the mastoid process is already developed, and the disease tends more and more to approach the adult type. Acute inflammation is common, but the important lesion, the disease which destroys hearing and yet goes untreated in so many cases, is chronic suppurative otitis media, or for short, aural suppuration. Even in the framing of child welfare schemes the prime importance of this disease is not recognised, while the provision of skilled aural treatment in fever hospitals remains an urgent necessity. The ears of the school child are nowadays well inspected and treated, but the child of more tender years is apt to be forgotten.

Indeed, a recent writer goes so far as to say that "there is little ear disease amongst children until the beginning of the school period." Surprised by this statement, I looked over my records of cases of aural suppuration in children, and found that of 145 patients no less than 95 were under the age of 5 years. It would therefore appear that ear disease is by no means uncommon in children under school age.

School medical inspection reports in Scotland show that of school entrants 1·3 per cent. have discharging ears. The figures range from 0·5 per cent. in Linlithgow county to 1·9 per cent. in the town of Stirling, but rural and urban populations appear to suffer with equal frequency. These estimates are probably low, as the ears may not be discharging at the time of examination. How familiar is the statement that "the ears have been running for months (or years) *off and on.*"

Ætiology.

Now what is the cause of all this ear disease, and how may it be prevented? In 130 cases of aural suppuration in children aged 1 to 10 years, I have on 66 occasions obtained from the mother a statement as to the supposed cause, with the following result:—

Measles	40 cases (31 %)	Whooping-cough	5 cases (4 %)
Scarlet fever ...	8 ,, (6 %)	Injury (?)	3 ,, (2 %)
Pneumonia ...	8 ,, (6 %)	Diphtheria ...	2 ,, (1·5 %)

The most striking fact revealed by the table is the high percentage of measles cases. It may be mentioned that these figures were drawn from two different years, so that they are not swelled by any particular epidemic. The small number of scarlet fever cases arises from the fact that two-thirds of the patients had not yet reached the age at which scarlet fever attains its maximum incidence.

Downe, who investigated the cause of otitis in 500 cases, found 26 per cent. due to measles and 12 per cent. due to scarlet fever. Scarlet fever is well known for its destructive effects on the ear, but on the whole it is well treated, as it is a notifiable and a hospital disease. Measles, on the other hand, is not notifiable, is treated at home, and is too often regarded as a trivial complaint. In reality, it is a more dangerous and disabling disease than scarlet fever, and the importance of measles, as a cause of chronic middle-ear suppuration, cannot be too strongly emphasised. All measures for the prevention of measles, whether by improved housing and greater cleanliness, by prompt isolation and more careful nursing, or by better treatment during the convalescent stage, will go far towards lessening

the tendency to aural complications and reducing the number of cases of preventable deafness in later life.

A second factor in the ætiology of aural suppuration is perhaps the most important factor of all. The great majority of children who suffer from chronic otitis are also sufferers from adenoids, and the septic infection of those adenoids are not only the cause of the otitis, but also the cause of its chronicity. The adenoid operation, therefore, has an important place in the prophylaxis as well as in the treatment of ear suppuration. As a portal of infection, the pharyngeal tonsil is second to none. Here enter measles, meningitis, and many another ill, and infection may readily pass from septic adenoids, along the Eustachian tube to the middle ear.

Measles and adenoids, then, are the two principal causes of aural suppuration in young children, and merit even greater attention than has hitherto been accorded to them.

Treatment.

The following scheme of treatment may be a useful guide in average cases: (1) cleansing and antisepsis; (2) removal of adenoids; (3) conservative operation; and (4) radical operation.

(1) and (2) will cure the majority of cases. After having tried many methods, I now advise the mother to make some mops with matches and cotton-wool, and with these to mop out the ear until dry; then to instil a few drops of peroxide of hydrogen and mop out once more until dry. This is to be done twice a day. Syringing, in unskilled hands, is worse than useless, and, indeed, I have known ears to cease discharging when the only advice was to stop syringing. The mopping method is a much more effective measure. As the discharge lessens, rectified spirit may, with advantage, be combined with the peroxide.

The importance of adenoids has already been noted. Large, firm masses may be present, but more frequently a small block of friable and pus-soaked tissue is removed at the operation. Should the removal of adenoids, and two or three months of systematic "mopping and drops," fail to effect improvement, operative methods must be considered.

The radical mastoid operation is seldom indicated in childhood and should only be performed in carefully selected cases—e.g., cholesteatoma, necrosis of ossicles, &c. One naturally hesitates to perform, upon a small child, an operation whose effects upon the sense of hearing cannot be foretold.

For this reason the so-called "conservative" mastoid operation (modified radical) should be chosen whenever possible. Into the details of the operation I do not propose to enter here, but shall merely enumerate its various stages—the opening of the antrum, the removal of the greater part of the posterior wall of the bony meatus, the curetting and clearing of the aditus (for this a bayonet-shaped dental excavator is most useful), the construction of a wide meatal flap, and the treatment of the bone cavity with bipp, which gives such excellent results in mastoid surgery. By this operation drainage is provided, while the drum and ossicles are left untouched, and the middle ear may recover, with full possession of its functions.

I lately had the opportunity of examining six cases, upon all of which I had performed the operation over two years ago. The ear was dry in five cases, and in all cases hearing was good (whisper at 6 feet).

LEICESTER ROYAL INFIRMARY.—On the promotion of Dr. T. V. Crosby to be honorary physician to the infirmary two vacancies were offered for assistant physiciancies, and to these Dr. J. D. Slight and Dr. Arthur Foster have been appointed. During the war Dr. Slight has been in charge of medical patients, officers as well as other ranks, at the 5th Northern General Hospital, and has also acted as temporary physician to the Royal Infirmary. Dr. Foster has been in charge of medical beds at the same military hospital. Mr. R. S. Lawson was at the same time appointed assistant surgeon. Mr. Lawson has been lecturer in anatomy at Edinburgh University, and acted as assistant lecturer and demonstrator in the pathological department there. During the war he was operating surgeon at the Royal Naval Hospital, Chatham, and on a hospital ship, and since demobilisation has been doing surgical work at Alder Hey Military Orthopædic Hospital.

A NOTE ON

PROPHYLACTIC QUININE IN MALARIA.

BY A. H. GOSSE, M.D. CANTAB., M.R.C.P. LOND.,
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IT was with an unbiassed view of its value or otherwise that the following investigations into the use of prophylactic quinine in malaria in two units of the Mesopotamian Expeditionary Force were carried out, and as they led to definite opinions they are now reported.

The Investigation Described.

A medical unit to look after a thousand hospital or convalescent patients was located at Mohammerah, some 25 miles from Basrah, with little or no opportunity for the personnel to visit other units, so that any infection by the malarial parasite was due to the conditions in the camp. As these conditions seemed to indicate that it was a suitable opportunity an investigation was undertaken. The troops permanently posted there consisted of three officers and about 30 N.C.O.'s and men, who had only been one month in the country, and had come direct from England. During this month one man had contracted malaria while in Basrah, and he was excluded from the investigation. None of the others had ever had malaria. No quinine was issued to or taken by any of them, as I explained to them that as it was a new camp, and the presence of mosquitoes infected by the malarial parasite was doubtful, experience alone would show whether it was necessary to take quinine or not, as every anopheles is not necessarily a carrier of malaria. If any of us became infected the administration of quinine would be reconsidered. For nine months, from September, 1916, to June, 1917, no quinine was taken and no malaria occurred. Towards the end of June two of the nursing orderlies reported sick with high fever on the same day, but it was not till four days later that a diagnosis of malaria was made. On this day a warrant officer reported sick and a blood film showed B.T. parasites present. Quinine sulphate, gr. v., in a mixture daily was ordered for the remaining 30 as a prophylactic measure. A list of their names was made and each dose taken was recorded. The men were told that an investigation was being carried out and they showed their interest by their methodical attendance at the dispensary to take quinine without any attempt to evade it. Three days later one of the men went sick and was also found to have malaria, but he must have been infected some ten days at least before quinine was started and 5 gr. daily was not sufficient to stop an attack. *During the next three months no further case of malaria occurred.* Major S. R. Christophers, I.M.S., visited the camp during this period to make an examination for anopheles in the area, and in the first tent found over a dozen. The value of the administration of prophylactic quinine in this camp seemed to be demonstrated.

I was then transferred for duty to a hospital five miles from Basrah. The female nursing staff of this hospital consisted of nine nursing sisters, none of whom had had malaria, though several of the orderlies were then sick with it. I advised them all to take quinine, but emphasised the importance I attached to being informed beforehand of the names of those who would take it regularly. The matron very kindly gave every assistance and the quinine mixture was handed round at their mess, where it was taken regularly by five of them, but the other four declined it, and these I regarded as controls. The five taking quinine did not develop malaria then or at any time while they were in Mesopotamia. Of the other four, two of them had malaria with parasites demonstrated in blood films within a month.

Shortly afterwards four new sisters were added to the nursing staff Two of them took quinine from the first day, while two others preferred not to take it, and were therefore regarded as further controls. In less than three weeks both the controls developed a temperature on the same day, and parasites were found in their blood. The two who took quinine did not develop malaria. Experiences such as these make it impossible to accept the view that prophylactic quinine is useless at all times.

Remarks.

Far more elaborate investigations than these have been frequently reported, and still the opinion for or against

prophylactic quinine is divided. Why, then, this apparently conflicting evidence? The work of these investigators must be accepted on both sides. It appears, then, that the solution can only lie in the discovery of the variable conditions under which the conflicting experiences have been obtained. To explain my meaning, let me refer to the opposing views which in the past have been held over the value of digitalis in heart disease. It is now known that the beneficial effects are exhibited in patients with the rapid pulse-rate of auricular fibrillation or auricular flutter, but has practically no effect on other cardiac conditions. The solution, then, lay in the discovery of the variable conditions under which the conflicting experiences had been obtained. What are these variable conditions in prophylactic quinine? May it be in the variable amount of the dose at the time of infection, or, in other words, in the variable number of bites received in 24 hours from infective anopheles?

Mesopotamia is not a very malarious country. Death from uncomplicated malaria is rare. The mortality is larger when complicated by heat stroke. The incidence of malaria is not high when compared with a badly malarious country like Northern Persia or Salonica, where prophylactic quinine is said to be almost useless. The conditions under which prophylactic quinine was demonstrated to be so beneficial in the above investigations was in a country where, as a rule, the infection was not severe and therefore probably the infecting dose was small—i.e., the numbers of bites from infective anopheles was small in any one day. It is suggested that the value of prophylactic quinine varies, and the prophylactic dose should be in direct proportion to the severity of the infection in any given area. There should be an optimum prophylactic dose for that area. The cases receiving an exceptionally large number of infective bites will still develop malaria, but the rest will be protected. In a very malarious country, when one is frequently bitten in the 24 hours by infective mosquitoes, gr. v., gr. x., or even larger doses may be insufficient to kill the parasite in all but a very few cases, and then prophylactic quinine might be regarded as useless.

Conclusion.

Prophylactic quinine in Mesopotamia is of the greatest benefit, but in certain other places it is almost, if not quite, useless, and it may be that, provided the dose necessary is not too high for regular administration, an optimum prophylactic dose will be demonstrated for every malarious area, varying even with the seasons and indicated perhaps by the rising or falling incidence of the disease.

X RAYS IN THE TREATMENT OF CERTAIN FORMS OF DYSMENORRHŒA:

A PLEA FOR THEIR MORE EXTENSIVE USE.

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THE object of this article is to call attention to certain methods of treatment which often succeed in cases of menstrual disturbance, when more orthodox measures, medical and surgical, have failed. I hasten to say that certain conditions should be fulfilled before any case of such a nature is undertaken by the radiologist. They are: (1) treatment by ordinary medical methods (drugs, regulation of way of living, &c.) should have a fair trial—by this is meant a matter of a few months; (2) surgical investigation must be made to exclude any gross deformity, and any minor surgical procedure not dangerous to life—e.g., dilatation of the cervix—tried if it seems indicated.

By this I do not mean to convey that no cases presenting any abnormality of an organic nature should be accepted. Cases in which serious malposition of the uterus was found and surgically corrected have failed to benefit, but have subsequently been cured by X rays. The presence of a certain amount of congestion in the ovaries and uterus is also not a bar to success; but it is important that the radiologist should know of any condition which may, should he fail, require surgical interference. Cases in which the uterine contents are septic—as after abortion—or where large fibroids are present, are obviously suitable for surgical treatment only. On the other hand, there are those in which nothing in the nature of a possible organic cause can be demonstrated. But, inevitably, there must be borderline cases in which opinions will differ as to what treatment should be followed. In making a decision it should be remembered that X ray treatment can be conducted without risk; if it fails, surgery can still be resorted to. But operations for straightening out uterine kinks are not wholly free from danger, and an excised ovary cannot be replaced.

Characteristics of a Suitable Case.

The type of case most suitable for X rays presents the following characteristics: (*a*) It is free from gross organic lesions. (*b*) There is excessive and prolonged bleeding at the menstrual periods, which follow one another with undue rapidity. (*c*) There is more or less pain of the usual menstrual type, and frequently headache and mental depression. (*d*) Owing to the excessive loss of blood and the shortness of the intervals the patient never really feels fit.

Cases conforming closely to the above type yield to X ray treatment with great regularity. A wide cone of rays is used, filtered through 3 mm. of aluminium, so that the ovaries and uterus receive radiations more or less equally at each sitting. The external genitals are protected by ray-proof material to prevent any possibility of temporary epilation. These patients are rarely able to attend for treatment for much more than two weeks out of four; and endeavour should be made to give at least seven sittings during each interval. The first period after starting treatment is usually worse, and the second may be little better. But if the treatment is going to succeed, the third should show distinct improvement. If it does not, ultimate success is unlikely. When improvement is obtained, X rays are omitted during the fourth interval, and a final course given during the fifth.

Objections to the Treatment.

Two objections have been raised against this form of treatment: (1) that there is risk of sterilisation; (2) that the integrity of the skin is endangered. The one question is in reality bound up with the other. It is practically impossible permanently to sterilise a woman below 40 without injury to the skin. In the literature on the X ray treatment of uterine fibroids great stress has been laid upon a technique which will produce sterilisation, and in consequence the method has not been recommended for patients who have not completed their fourth decade. But in dealing with young subjects who suffer from menstrual disturbance no attempt is made to carry the dosage beyond what is necessary to restrain excessive ovarian function. This statement implies a theory as to the cause of the type of dysmenorrhœa under discussion. The theory is that just as excessive thyroid—or possibly thyroid and thymus—action is the immediate cause of the symptom-complex known as Graves's disease, so does excess of ovarian hormone produce what the present writer has ventured to call the "ovarian syndrome": excessive bleeding, prolonged periods, diminished intervals, headache, and depression. In exophthalmic goitre the thyroid can be "tamed" without in any way interfering with its normal function. In a similar way the ovary, regarded as a ductless gland, can be restrained from excessive exuberance by comparatively small doses of X rays. It was proposed some years ago by a well-known surgeon that portions of the ovaries should be removed in such cases. This procedure would, of course, be exactly on a par with partial thyroidectomy for Graves's disease, and could only be regarded as justifiable if all other measures failed. Also, as regards X rays, their effect upon low forms of inflammation in general must not be forgotten. In chronic colitis, for instance, their beneficial effects are well established, and therefore the lining of the uterus, if congested, is in all probability directly benefited by their application.

Effects on the Skin.

As to visible effects on the skin, a sun-burnt appearance is generally produced about the end of the second course. There should be no redness or tenderness; at the most a slight itching at night, which is readily relieved by cold cream. This browning occurs only when small, graduated doses are given, and appears to be protective.[1]

[1] I have found that in treating cancer once this browning is produced very large doses are tolerated for months and even years without any breaking down.

With the small dosage necessary in dysmenorrhœa cases, the brown layer begins to peel off in about one month after the cessation of treatment, leaving a perfectly healthy skin surface. The skin is fully fit to stand operation, should this be necessary, within two months.

Danger of Faulty Technique.

That great harm can be done by faulty technique must be admitted; but this can be said of most modern methods of treatment. The risk in skilled hands is practically nil. And it must be remembered that—if the conditions stated at the beginning of this article have been fulfilled—either there is no alternative, or the alternative is a major operation.

To the majority of such patients life is literally not worth living, and I personally have found no class of sufferers so pathetically grateful for relief as women thus afflicted. It is essentially a disorder of young women, and ruins the best years of their life, often preventing marriage; or, what is worse, making it a failure.

As to choice of cases, the more nearly one approaches to the type described in the early part of this paper, the more likely is it to benefit by X ray treatment. When pain is prominent rather than loss of blood, cure is less probable, but a trial should be made.

Recent Cases.

The present writer first referred to this subject in an article published some years ago, in which details of several cases were given.[2] Two more recent ones are quoted below.

L. B., school-teacher, 30. First seen January, 1918. All her life had been troubled by excessive loss at periods. Of late years the condition had become steadily worse. Periods lasted ten days, and the free interval was less than a fortnight. There was a good deal of pain and headache at the time, and 2-3 days had to be spent in bed. She was in danger of losing her position and was in a very depressed state, threatening suicide. She had had prolonged treatment from her medical attendant and was certified by a gynæcologist to be apparently free from organic disease. X ray treatment at first aggravated the condition, and the interval succeeding the commencement of treatment was so short that X ray dosage was continued through a part of the second period—a departure from the usual procedure. The free period following lasted three weeks, and the succeeding period—the third after the commencement of treatment—was almost normal. A complete cure seems to have resulted, as the patient wrote in December, 1918 (seven months after stopping all treatment), to say that she was quite well.

The above case is typical of those in which a large measure of success may reasonably be expected. In one such as the following less confidence can be expressed.

C. M., 28, spinster. Had suffered since the age of 14 from painful menstrual periods lasting 6-7 days. Flow somewhat greater than normal. Headache severe for 3-4 days at the time of periods. Year by year the condition had become worse. General health in intervals indifferent, and patient was unable to follow any regular occupation. The uterus and both ovaries were slightly enlarged and tender to palpation. The girl was very miserable, and a gynæcological surgeon suggested complete removal of the organs if no other means of relief could be found. As a final resort before operation it was decided to try X rays. The second period after the commencement of treatment was considerably better, in so much that the bleeding was less and that it lasted only five days. Pain also was not so violent. Two more "interval courses" of X rays were given, but no further improvement occurred, and, in view of the possible final necessity for operation, it was not considered desirable to push the treatment. Result: Periods reduced to five days instead of 6-7. Flow normal. Pain more bearable. General health improved. Patient writes three months after cessation of treatment to say that, on the whole, she remains much better than before she had X rays.

In the above instance X ray treatment succeeded only to a limited degree, but it enabled the patient to avoid a serious and mutilating operation, at least for the time. I am not to be taken as opposing the operation of pan-hysterectomy in intractable cases of dysmenorrhœa, provided every other possible means of relief have been tried without success, *but X rays should always be remembered as among the most powerful of these means.*

The radiologist, holding, as it were, a position midway between that of the physician and the surgeon, has no need to encroach upon the domain of either. The patient with dysmenorrhœa should first receive medical treatment—the term "medical" being used in its more limited sense. If this fails, it should be ascertained whether there is any recognised surgical cause for the trouble, such as a contracted os, or whether any condition exists dangerous to life—e.g., septic endometritis, large fibroid, uterine cancer, &c. Failing the presence of any of the above, X rays should be tried before major surgery is resorted to.

The vexed question as to the treatment of uterine fibroids I do not purpose entering on here, except to say that *small* fibroids associated with excessive bleeding at the menstrual periods, but not in the intervals, can be successfully dealt with by X rays in women near the menopause.

Harley-street, W.

[2] Practitioner, vol. xcii., p. 716.

IODIDES AND THE THYROID.[1]

BY FRED RANSOM, M.D. EDIN.,

READER IN PHARMACOLOGY IN THE UNIVERSITY OF LONDON.

THE specific relationship between the thyroid gland and iodine was first pointed out by Baumann, who discovered that the normal thyroid contains a considerable amount of iodine in organic combination. Iodine is a frequent constituent of cells generally, but the thyroid contains relatively 8–10 times more than any other organ.

Baumann obtained from the thyroid by a somewhat drastic means a substance which he believed to be the active principle called iodothyrin, and looking upon it as the cause of the remarkable effects upon metabolism. Oswald has, however, shown that iodothyrin is an artificial product, and that its mother substance is an iodised protein, iodothyeoglobulin, from which iodothyrin can only be obtained by breaking up the protein molecule.

An extract of the gland made with physiological salt solution contains all the iodine-containing substance, and gives relief in hypothyroidismus; but so do various organic and inorganic preparations of iodine, though to a less degree.

Considerations as to the Active Principle of the Gland.

Are we, then, entitled to consider that iodine is the active principle of the gland? This theory has been advocated by Swingle, who considers that the iodine plays the part of an hormone, but before accepting it certain points require consideration; the presence of iodine in the thyroid is no proof that the activity of the organ is dependent upon its iodine-content, for one function of the thyroid may be to absorb iodine, another to provide a specific internal secretion. Even the fact that iodine is specifically absorbed by the thyroid, and perhaps stimulates secretion, does not prove that iodothyeoglobulin constitutes the internal secretion of the gland. Carlson and Woelfel failed to find iodine in the lymph flowing out of the thyroid. Moreover, the iodine-content of the thyroid is subject to much variation and is greatly influenced by the amount of iodine in the food. The thyroid of carnivora contains little or even no iodine; the amount of iodine is greatest in herbivora, omnivora take a middle place. The thyroid of dogs can be made iodine-free by feeding on an exclusively flesh diet, and still the functions of the gland remain unimpaired. The fœtal thyroid and the thyroids of newly born infants contain no iodine, yet in sucking animals thyroidectomy, after removal from the mother, produces its characteristic effects.

The iodine-content of the human thyroid is very variable; Jolin, in extensive investigations in Sweden, found these variations so great that he regards the iodine as of quite secondary importance; he was also unable to detect any connexion between iodine-content and health. Abelin found that a thyroid extract containing much iodine did not differ in activity from one containing little. During the administration of an iodide the iodine-content of the gland may rise to 4–5 times the average normal, and yet in the treatment of cretinism or myxœdema iodides are not so successful as is the taking of the gland itself. In view of these facts it appears at least improbable that the iodine plays an important primary rôle in the activity of the internal secretion of the thyroid.

Is, then, the active principle likely to be a protein? There are several facts which tell against such a

[1] Abstract of a post-graduate lecture delivered at the London (R.F.H.) School of Medicine for Women.

hypothesis. Abderhalden and also Herzfeld and Klinger got characteristic effects with protein-free extracts of thyroid. Abelin found that thyreoglandol, a protein and lipoid-free preparation, has the same effect on metabolism as the gland itself; indeed, the efficacy of the per os treatment with the dried gland would seem to indicate that the active principle is not a protein. An iodised protein which v. Fuerth employed was split up in the cat's intestine so that iodine appeared in the cells of the gut wall and in the blood, not as iodised albumin or peptone, but in inorganic form. Abelin considers it likely that the active principle of the thyroid is formed from protein in the cell metabolism of the gland, much as adrenalin arises from the protein of the adrenals. The investigations of Kendall go a long way to confirm this opinion, for he has obtained from thyroid a crystalline body of definite chemical constitution to which he gives the name thyroxin It is an indol derivative, trihydrotriiodo-a-oxyindol-propionic acid, and Janney, who has clinical experience in the use of Kendall's preparation, considers that it is an hormone possessing the functions ascribed to the thyroid secretion. Kendall does not think that the iodine is of primary importance, and hence the omission of any reference to it in the name which he has given to his preparation.

An Apparent Paradox.

There is, then, considerable probability that the active principle of the thyroid is a breakdown product of protein which may be, but is not, necessarily iodised. Iodine, if present, has apparently no direct effect upon the activity of the internal secretion, and yet there is no doubt that when that activity is diminished it can often be restored to a certain extent by administration of iodides. Is there any explanation of the apparent paradox?

Jobling and Petersen have shown that unsaturated fatty acids have a powerful effect in inhibiting autolysis, but that in presence of iodine these acids on becoming saturated lose their inhibitory effect, so that the ferments causing autolysis are free to act. We have seen that the active principle of the thyroid is probably produced by the breakdown of protein in the gland—i.e, by autolysis. This process would, according to Jobling and Petersen, be facilitated by the presence of iodine in the gland, because the inhibitory effect of unsaturated fatty acids in the blood would be diminished or done away with owing to their saturation with iodine.

An inefficiency of the thyroid secretion might conceivably depend upon an excess of unsaturated fatty acids in the blood checking the autolysis by which the thyroid secretion is formed and in such cases the administration of iodides would be effective by promoting the saturation of the acids. If the inefficiency of the thyroid were due to destruction or removal of part of the gland, the activity of the remainder might well be increased by iodides which are specifically taken up by the gland, and would there favour the characteristic autolysis by checking inhibition.

Possibly the curative action of iodides in tertiary syphilis may be explained by the thyroid effect of the drug in thus favouring an increase in the active secretion passed into the blood, and so facilitating the absorption of lowly organised tissues such as gummata, &c. The same would apply to the use of iodides in the treatment of enlarged lymphatic glands.

If the above premises are correct they suggest that tertiary syphilis might be at least as successfully treated with thyroid as with iodides; indeed, one might anticipate a quicker result, and, moreover, there would be no fear of iodism.

Summary.

The action of iodides in relieving a condition in which the thyroid secretion is deficient is due to two facts: (1) iodine is specifically absorbed by the gland; (2) the iodine in the gland in saturating the unsaturated fatty acids of the blood-supply favours the autolysis by which the active principle of the gland is produced.[2]

The efficacy of iodides in tertiary syphilis may be explained on these lines, and it is anticipated that tertiary syphilis may be successfully treated with thyroid.

[2] The usefulness of cod-liver oil in tuberculosis may be in part due to its high content of unsaturated fatty acids limiting to some extent the production of thyroid excretion, and so serving to prevent the absorption of the lowly organised tubercle tissue and the setting free of the bacillus.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF NERVE TRANSPLANTATION.

BY NEVILLE I. SPRIGGS, M.D. LOND., F.R.C.S. ENG.,
CAPTAIN, R.A.M.C. (T.); MEDICAL REFEREE TO MINISTRY OF PENSIONS; CITY POLICE SURGEON, ETC.

NERVE transplantation now being on its trial for war injuries of nerves, the following case, though only partially successful, is deemed worthy of record.

The Case Described.

Pte. S. was wounded in the left arm on Jan. 6th, 1916. There was a fracture of the humerus with clinically complete musculo-spiral paralysis. Several operations were needed before healing occurred, and then a large scar resulted very adherent to the bone. On Oct. 1st, 1917, the musculo-spiral nerve was exposed and found to be completely divided, with bulbs adherent to the bone. After excision of the bulbs the nerve ends could not be stretched to within an inch of each other. The external cutaneous nerve of the thigh was then searched for, and found with some difficulty as it was abnormally small. A length of two inches was removed, divided at its middle, and the two one-inch lengths so formed were stitched into the gap in the musculo-spiral side by side. A branch to the triceps, which was also implicated, was at the same time stitched in to the upper junction. The muscle was then stitched over the bone, between it and the bridged nerve, and the wound closed.

The wound healed well and the man was shortly after discharged from the Army and went to reside nearer his home in the north, where he was treated by electricity and massage as an out-patient. It was thought that his chance of recovering the function of the injured nerve was very small.

He was next seen by me on May 31st, 1918 (about eight months after the operation). Epicritic sensation, which had been lost on the outer side of the forearm owing to the low branching of the nerve, had then recovered. The wasting of the extensors and supinators was obviously less. There was slight but definite action both of the supinators and of the extensors of the wrist. There was no action of the extensors of the fingers and thumb. The grasp was good and the man was starting work. He was supplied with a "long cock-up" splint and told to wear it at night only.

Result of Further Examination.

Another examination has been made recently (May, 1919). The patient has been working since last seen. There is fair power in the supinators and in the wrist extensors, and there is slight power in the long extensors of thumb and fingers, so that one may hope that the man will still continue to improve.

The scar in the arm is still somewhat adherent to the bone, and probably to the repaired nerve also. I consider that had more attention been given to the excision and "toilet" of this scar a more complete and earlier recovery would have resulted.

I am indebted to Colonel C. J. Bond and to Dr. Annie C. Greenep for advice and help in this case.

A CASE OF STOMACH AND BOWEL ATONY IN INFLUENZAL PNEUMONIA.

BY NORMAN BRADLY, M.D.

IN THE LANCET of March 15th Mr. R. Eccles Smith has drawn attention to this condition in his paper on "Influenzal Intra-abdominal Catastrophes." The following case is recorded to show the value of pituitrin in this condition.

Account of Case.

Miss ——, aged 21, was taken ill on March 4th and developed signs of pneumonia on the 9th. Toxæmia was profound, hæmoptysis was a recurring symptom, and severe cyanosis was constant, the administration of oxygen being almost continuous. On the 15th occasional vomiting of altered blood commenced and the pulse became markedly intermittent; on the 18th the temperature dropped to subnormal, resp. 40–48, pulse 96; vomiting persisted and became

almost continuous; everything by mouth was stopped and replaced by salines per rectum; the vomiting became less frequent, but recurred at once on allowing anything by the mouth.

On the 20th her condition was desperate; temp. subnormal, pulse very intermittent and infrequent (50–60), resp. 40–48, deeply cyanosed, persistent vomiting, petechial hæmorrhages under skin of chest; the liver dullness absent, upper part of abdomen distended, very restless and no sleep.

Six doses of pituitrin (0·5 c.cm. intramuscular and four-hourly) were given; in addition salines per rectum, fomentations, and gentle massage to abdomen. Forty-eight hours after the third injection of pituitrin the vomiting ceased, pulse became regular and more frequent (70–80). Respirations 20. The temperature had been subnormal for six days, a rise to 101° now occurred and gradually came down in a few days. The patient made an uninterrupted recovery. The condition was without doubt acute toxæmic dilatation of the stomach as seen in several post-mortems on these cases.

Remarks.

"Early stomach washing," as suggested by Mr. Eccles Smith, would no doubt have helped towards recovery, but was quite impossible on account of the extreme cyanosis; pituitrin and salines saved this patient. The irregular, and particularly infrequent, heart action as an additional sign of this condition may be worthy of note.

Crowborough, Sussex.

A CASE OF LETHARGY.

BY GRACE H. GIFFEN DUNDAS, F.R.C.S. IREL., D.P.H. CAMB.

THE interest in this case lies partly in the question of diagnosis—was it a case of encephalitis lethargica?—and in the fact that the patient, being intelligent, was on convalescing able to tell something of her psychological state during her three weeks' cataleptic-like condition. I have permission from Dr. G. E. Oates, medical superintendent of the Ilford Isolation Hospital, to report the case.

Notes of Case.

Previous history.—Patient, aged 26, had erysipelas of face and scalp four years ago; very ill, high temperature, delirium, &c. She is nervous and quick-tempered. A few years ago she took up shorthand and typewriting, but was too "nervous" to continue, whereupon she confined herself to housework at home, at which she is very energetic. She was very nervous during air-raids, trembling violently. Three months before her present illness she had a great shock on hearing that a soldier to whom she had been engaged for years was killed. Her mother's illness (bronchitis) greatly worried her during the three months preceding her own illness.

Present illness began on Jan. 31st with a feeling of great restlessness. Patient had great difficulty in getting through her work that day. For a week previous to this she had headache and constipation. On Feb. 1st she remained in bed thinking she had "a nervous breakdown." That night she went into her sister's bedroom, not liking to be alone and not liking the dark. She got worse daily, and was admitted to the Ilford Isolation Hospital on Feb. 6th.

On admission patient lay supine without endeavouring to make the slightest movement. Limbs rigid. Elbows flexed and forearms lying across chest. Sweating profusely. Sordes on lips; mouth dry and dirty. Severe headache. Pupils reacted sluggishly to light. Partial ptosis of both lids. When asked to open her eyes she did so with difficulty. No squint, no diplopia, no evident loss of vision or paralysis of accommodation. Mask-like expression of face. Could neither raise her eyebrows nor frown; could not smile or close her eyelids firmly, or close her lips (upper teeth and part of gum exposed); could not use muscles of mastication. Understood all that was said. Answered with difficulty and in monosyllables; could phonate, but articulated badly. Could not depress lower jaw. It was not possible to ascertain if there was sensory paralysis of skin. No paralysis of taste. Thus there was no evident paralysis of third, fourth, and sixth nerves, but paralysis of motor branch of fifth, seventh, eleventh, and twelfth. Kernig's sign was absent; knee-jerks and Babinski's sign present. Arms and legs paralysed. Patient gave not the slightest indication of being aware that one was manipulating her. The back was red in places, she not having been moved during the seven days she had lain in bed. Menstruation present, bad smelling discharge.

Treatment.—Patient was placed on a water bed and put on two-hourly milk feeds, occasionally varying the milk with Valentine's beef juice. Mouth toilet was attended to. Catheterisation and enemata were given when required.

Subsequent history until March 13th, when patient was discharged well. Temperature dropped to normal after two days; thereafter subnormal. Pulse gradually dropped to 80–90, respirations to 20. She slept deeply most of the time. Bed-sores occurred during the first week, but rapidly healed when she began to move a little. Retention of urine for the first few days, then incontinence. Constipation was extreme. Epsom salts, 1 drachm in each feed, had no result. Two large soap-and-water enemata with 1 ounce ol. ricini were retained. The gut was thereupon washed out, after which incontinence set in.

It was difficult to feed the patient, as she could not open her jaw. Fortunately, one or two teeth were absent. She could manage nothing but fluids for the first fortnight, after which she began gradually with solids. The first bite of bread and butter she tried had to be taken out of her mouth again, neither the power of mastication nor deglutition having returned.

Gross tremors of the limbs formed a prominent sign, especially marked if the patient tried to put out an effort to move the limb. Movement began three weeks after the beginning of the illness, first seen in the upper lip when asked to try to close her lips. Each day thereafter the orbicularis oris improved. The existing light did not allow of a series of photographs showing the daily improvement in frowning, smiling, &c. Movement in the arms next came back, the left being the last to recover. Then followed movement in neck, back, and lower limbs, the left leg being the last to recover. Strychnine was cautiously exhibited by the time the legs began to recover.

Sensations of Patient during Illness.

No emotional symptoms of any description accompanied convalescence. Patient was neither hilarious nor depressed. She voluntarily showed her daily progress in movements and expressed herself as grateful to the nurses for everything done for her.

She willingly told of her sensations during the three weeks when to all outward appearance she had no sensations. She thought she had lain five weeks without movement. There was an occasional hiatus in her mind as to the sequence of events, which may have been due, of course, to deep sleep. When awake she heard all that was said and would willingly have answered the questions I asked the nurse if she had had the power to. She was acutely aware of catheterisation, incontinences, &c. She had terrifying dreams usually, of someone trying to do her a bodily harm. Occasionally she had a distinct sense of well-being, but was unable to say if this sense followed on her gut being emptied or what.

She had lost sense of position and direction, having no idea of how her legs and her left arm were placed. Eyes and teeth seemed misplaced, her eyes up at the roots of her hair and her teeth several inches in front of her mouth. She resented her friends trying to keep her awake during the visiting hour. She resented them "chaffing" her, as she "could not chaff them back." I have only to add that the ward sister resented the friends expressing surprise at the cure *nature* had effected.

No case of encephalitis lethargica has been notified in this sanitary area. During the last 12 months two cases of poliomyelitis and one of cerebro-spinal fever were notified.

A fortnight after the patient's discharge from hospital—i.e., two months from the commencement of her illness—she was perfectly well with no untoward symptom, either mental or motor.

THE Dorset Education Committee has decided to appoint an additional assistant medical officer at a salary of £450 per annum.

HOUSING IN BELFAST.—A scheme has been evolved in Belfast (which, however, has still to be sanctioned by the Local Government Board), under which it is hoped that the first instalment of 1500 houses will be built within the next year at an estimated cost of £1,000,000. The Corporation have had several offers of sites for the new houses, so that no difficulty is likely to arise in this respect. But how will a workman pay a rental commensurate with the enormous cost of building houses? Will an increased city rate be acceptable to people who have suffered from the war if the great industries which require more houses contribute only in the same proportion? It is felt that the ship-building companies, who have earned much money during the war, might erect the houses themselves for their own operatives as part of their business. One thing is clear—owing to its increasing population, Belfast is badly in need of working-class houses.

Reviews and Notices of Books.

The Future of Medicine. By Sir JAMES MACKENZIE, F.R.S., F.R.C.P., Consulting Physician to the London Hospital. London: Henry Frowde and Hodder and Stoughton. (Oxford Medical Publications.) 1919. Pp. 238. 8*s.* 6*d.*

EDUCATIONAL reform is an acknowledged need of the present day and the new Education Act is an earnest and well-thought-out attempt to satisfy that need in so far as general education goes. If a nation is not to drop behind in humanity's race its members must be educated, and in addition, they must be placed in the best position for profiting by the education supplied. A prime necessity for this desirable condition is health, for no sickly, ill-developed, or unhealthy learner can use the knowledge or means of knowledge supplied by his teacher to the best advantage. This being so, the next necessity is that that portion of the community in whose hands lies the preservation of the nations health—namely, the medical profession—should learn how to carry out the great work entrusted to them in the best and most profitable manner. This is the simple message from Sir James Mackenzie to his fellow-students contained in this book. Over and over again it has been said in different ways and with different arguments, so that no one, medical or lay, will be found to dispute the proposition; there is plenty of room for its enthusiastic support, and never has there been provided finer advocacy than that of Sir James Mackenzie.

Despite all the advances which have been made in medical science during the last 50 years, no one realises more keenly than do medical men themselves, that our knowledge of disease practically only begins when the patient is already more or less damaged, and that though the ideal of medicine is "pricipiis obsta," yet only in very few instances are we able to carry out this precept. Teaching is at fault, teachers are at fault, examinations are at fault, and consequently practice is hampered; even while in this country our tests are fair, our examinations standardised, and our instructors in the main keen and often distinguished, if poorly-paid men. Sir James Mackenzie treats in admirably simple language, and with a wealth of illustration, the position outlined above, and is able to do so from a strong position, for he has personally triumphed over the difficulties which lie ahead of the reformer, and has vastly improved medical practice by his personal teaching. His thesis includes three heads, which seem obvious to absurdity and yet are apparently but little realised. Shortly, they are as follows: 1. If a problem is to be solved, the nature of the problem and its difficulties should first be comprehended. 2. Disease is only made manifest by the symptoms which it produces, and to get a thorough understanding of disease we must recognise the symptoms not merely by detecting their presence, but by understanding the mechanism of their production and their bearing on the health of the patient. 3. He who conducts the investigation should have had the opportunity of seeing disease in all its phases, and of observing the various symptoms which it produces. Allow these premises, and it follows that only one class of individual has the opportunity for acquiring the knowledge, and that is the class of the general practitioner. This position leads Sir James Mackenzie to a chapter upon medical education wherein he puts his finger upon one of the weak points in the present system of medical education—namely, its divorce from the work of the general practitioner. The average teacher either has no experience of the difficulties which the majority of his pupils will meet with in their life's work, or if he has had any experience of such difficulties in his own training he seems to have forgotten them.

It must have occurred to many persons of intelligence—both teachers and taught—that books written with the idea of instruction might well be written not by a master of his subject alone, but in collaboration with an intelligent learner. The master might write a chapter and then hand it over to the learner for comment and the latter could then, when he came to a passage which puzzled him, say "What do you mean when you say this?" Written after this manner, a book would gain infinitely in value as an educational agency, but the teaching in hospitals, which are at present the only schools of medicine, cannot be conducted after the same model. The value of the old apprenticeship system, the return of which we are not advocating, was that it offered personal communication between the learner and a teacher who was living and working under the very difficulties which the learner would one day have to deal with. At the present day, says Sir James Mackenzie, the student is instructed by a number of teachers not one of whom has had any experience of the life he is to lead as a general practitioner; and, moreover, the general practitioner, who has sometimes suffered from a defective education, is never consulted on educational matters. In the system of apprenticeship, however, there would never be any guarantee that the master was able, or had the leisure, to teach the pupil properly, so that the system can find no place in a standardised curriculum.

We have said enough to indicate the line of argument which Sir James Mackenzie pursues, and we think that his suggestion that in every school of medicine there should be one or more teachers who have passed through 10 to 20 years of general practice is an admirable one. We can see no better method of supplying teachers who have a knowledge at first hand of what ought to be taught.

Text-book of Ophthalmology. By Hofrath ERNST FUCHS, former Professor of Ophthalmology in the University of Vienna. Authorised translation from the twelfth German edition, by ALEXANDER DUANE, M.D. Sixth edition. London and Philadelphia: J. B. Lippincott Company. Pp. 1067. 30*s.*

THIS text-book is too well known to need recommendation. The present edition is nearly a reprint of the fifth which appeared two years ago, but the changes between the fifth and earlier editions were numerous and important. For these Professor Duane is almost wholly responsible. No new German edition has appeared for some years, and the book, though based on Fuchs's original text, tends to become more and more the work of the American translator. Its composite nature remains, and in most parts additions and alterations are indicated by the use of brackets and the translator's initial D. Some parts are rewritten; for instance, the chapter on disturbances of motility, a subject which the translator has made peculiarly his own. All this tends to increase the bulk of the volume. And yet in parts it still needs to be brought up to date. In the chapter on Glaucoma, for example, we find a good deal about the older theories of its pathology, but no sufficient directions for taking the visual fields, or of their importance in early diagnosis. Again, the older theories of colour blindness are explained at considerable length, but the newer ones nearly ignored. For the beginner we should recommend a smaller text-book, but as a book of reference and for the advanced student, the work of Fuchs will still be deservedly popular. The chapter on Diseases of the Cornea and the sections on Pupillary Reactions are hard to beat. Therefore, we say that for anyone who has time to study the book in its entirety it will doubtless be of great value, but he will soon discover that, in a subject which is alive, no single text-book can possibly be sufficient for all that he will need. Especially in the chapter on Operations, more references would be useful, so that the full description of any particular operation that the operator is at all likely to require could be easily found at a library. The same principle might perhaps be applied to the rarer diseases and to important observations relating to the commoner ones.

Auto-Erotic Phenomena in Adolescence. By K. MENZIES. With a foreword by Dr. ERNEST JONES. London: H. K. Lewis and Co., Ltd. 1919. Pp. viii. + 88. 4*s.* 6*d.*

THERE is so much nonsense written on the subject of masturbation that such an analytical study of the psychology and psycho-pathology of onanism as has been prepared in this small volume has become an unpleasant necessity. Mr. Menzies has read widely in his subject and writes as a psychologist. The mental conflict engendered by false conceptions of this habit is considered to be the most serious aspect of the problem. Whether it is necessary to invoke the aid of psycho-analysis in treatment of the numerous sufferers is a question the reader will answer according to his belief in this method of

psychotherapy. When once the condition itself is properly understood, a little common sense and a rational education of the young may well make the somewhat painful and cumbersome efforts of the skilled psycho-analyst unnecessary. But whatever we think of Mr. Menzies's views of treatment, or of his ethical considerations, we cannot but be grateful that he has handled his subject in a sane way. In the result he has achieved nothing new, but he has made available in a small compass the experience and conclusions of many writers whose opinions are worth knowing.

A Short Practice of Medicine. By ROBERT A. FLEMING, M.A., M.D., F.R.C.P.E., F.R.S.E., Lecturer on Practice of Medicine, School of the Royal Colleges, Edinburgh; Senior Lecturer on Clinical Medicine, Edinburgh University; Physician, Royal Infirmary, Edinburgh. Third edition. London: J. and A. Churchill. 1919. Pp. 676. 21*s.*

THE purpose of this manual is to provide students attending lectures on medicine with a general synopsis of that subject. The author suggests that its use will free the teacher from dictating, year in and year out, statements which can be mastered as well, if not better, from a text-book. It is perhaps not surprising that the index of a text-book on the practice of medicine contains no reference to acidosis or vagotonia, but when one looks in vain for colon bacilluria or encephalitis lethargica one is forced to the conclusion that the writer either has not taken the full advantage which a new edition offers for the inclusion of new material, or considers such subjects more suited to oral instruction. However this may be, the opportunity has been taken to rewrite and bring up to date the descriptions of many diseases, and various medical diseases met with during the war, such as trench fever and trench nephritis, have received recognition. The book is arranged on the usual plan adopted in works of systematic medicine. We notice that rickets, scurvy, and beri-beri are classed together as diseases due to faulty nutrition. Rheumatoid arthritis is not very clearly distinguished from osteo-arthritis and is found, with osteomalacia, hypertrophic pulmonary osteo-arthropathy, osteitis deformans, and achondroplasia, under diseases of bones and joints. No mention is made, we observe, of the association between diabetes insipidus and morbid change in the pituitary body, but the writer of a synopsis has to confine his work within definite limits, so that some omissions become imperative, the author being the arbiter. The old anatomical terminology is used throughout the book and we think the author is to be commended on its retention; for the sake of those who are accustomed to the international nomenclature a table of such equivalent terms in the two systems as have been made use of in the text is provided. Several new illustrations have been added and these now number 64, nearly half of them occurring in the section devoted to diseases of the nervous system.

The book provides a very fair summary of the current views on medicine, but we are inclined to think it is likely to prove of greater use to students than to practitioners.

A Text-book of Practical Therapeutics. By HOBART AMORY HARE, M.D., B.Sc., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital. Seventeenth edition. London: Henry Kimpton. 1919. Pp. 1024. 28*s.*

This work thoroughly justifies its title of "practical therapeutics with especial reference to the application of remedial measures to disease and their employment upon a practical basis." Although there is of necessity a certain amount of theoretical discussion the practical element is never lost sight of. Great care has been taken to bring this edition fully up to date, and so many alterations and additions have been found necessary that a large part of it has been reset in new type. Though we are dealing with a seventeenth edition, it is not an old treatise.

Most of the book is taken up with a consideration of "drugs." Under this heading the various preparations used in the practice of medicine are fully discussed. A uniform method is adopted throughout. A description is first given of the drug, then its physiological action is explained at sufficient length to enable the reader to appreciate fully its effect upon the various systems of the body. Next, its therapeutic use is considered, and the indications for its employment. The mode of administration is also explained, and when necessary the symptoms of poisoning are also given. In the preface Professor Hare remarks that "many important drugs heretofore made in Germany, or under German patents, are now made in this country and have been given names whereby they may be properly designated." It may be that practitioners will not at first recognise these names; for instance, the word arsphenamine is adopted for salvarsan (although in the full description which follows the name salvarsan is retained throughout); procaine is substituted for novocaine, and barbital for veronal.

Experience during the war has increased the knowledge in relation to shock, and has emphasised the need of careful methods of intravenous injection or of direct transfusion; therefore the technique of these procedures is fully and clearly described. The use of Dakin's fluid and dichloramine-T by Carrel's methods is also discussed. We would draw attention to the valuable remarks on chloroform and the method of its administration. The section of the book dealing with the treatment of various diseases will be appreciated by practitioners, as will also be the index of diseases and remedies.

We believe that this work will particularly appeal to those in general practice, who will find it a useful work of reference; the material contained in it is essentially practical, and owing to the general arrangement of the book the information required can be easily found.

Anti-malaria Work in Macedonia. By W. G. WILLOUGHBY, M.D., and LOUIS CASSIDY, M.B. With 14 plates. London: H. K. Lewis and Co. 1918. Pp. x. + 68. 3*s.* 6*d.* net.

THE authors in their preface to this little book of about 50 pages of text expressly state that it is "not intended as a scientific work," after which we cannot expect the subject-matter to be treated in a scientific way, though the authors' efforts are commendable. But we must express our sorrow that it should be necessary to issue a book of this kind for the use, apparently, of medical officers. If we may read between the lines, the authors appear to have had to struggle against "regulations" and, indeed, to put it bluntly, against ignorance, for on p. 65 they say coöperation in anti-malarial measures is far more satisfactory when its basis is intellectual. We see no indication that the authors lived in an atmosphere of research. What anopheline or anophelines were the carriers, what percentage of these were infected, what was the infection rate amongst the indigenous population and the troops, what were the breeding-places of the transmitting species, are not stated. It is information such as only specially trained medical men could give. We believe that an anti-mosquito campaign can only be scientifically and economically carried out if these factors are known, and that it is unscientific to proceed in the dark and take measures against all anophelines. Suppose, for instance, that the main carrier is a species restricted in numbers with restricted breeding-places, a supposition that in certain cases actually agrees with the facts, then it is good policy, especially where labour is a difficult question or money is scarce, to proceed against this species first.

This book, then, gives the impression that research was not in progress in the field of malaria operations in question. The authors, however, believe that the actual anti-malaria operations were successful, though the data for forming an independent opinion are not given.

Life and Its Maintenance: A Symposium of Biological Problems of the Day. London, Glasgow, and Bombay: Blackie and Sons, Ltd. 1919. Pp. 297. 5*s.*

Lectures on Sex and Heredity, delivered in Glasgow, 1917–1918. By F. O. BOWER, J. GRAHAM KERR, and W. E. AGAR. London: Macmillan and Co., Ltd. 1919. Pp. 120. 5*s.*

THE first of these books is a volume of 15 lectures which were delivered to a mixed audience at University College, London, during the spring of 1918 and which were designed to deal with the vital war problems such as the supply, nutritional value, and production of food, the physiological aspects of flying, the anaerobic treatment of wounds, and industrial efficiency and fatigue, the lecturers being selected from professorial chairs of the universities of the country or

from important institutions for research such as the Lister Institute of Preventive Medicine. Although the lectures were called forth by the exigencies of war, they cannot but have an important bearing in times of peace, more especially during the reconstruction period, in the throes of which we now are. The Problem of Food, by Professor William Bayliss, and War Bread and its Constituents, by Professor F. G. Hopkins, discuss important matters which expanding populations and economic needs make vital, while Vitamines, by Miss E. Margaret Hume, is a subject equally urgent in its bearings. Professor Cushny's lecture on Alcohol and other Beverages in War Time, while not encroaching upon the controversy which is engaging the attention of America at the present moment, and which in the near future may react upon our own country, inquires how far beer, and incidentally domestic beverages, may be regarded as food. The Physiological Aspects of Flying, by Lieutenant-Colonel Martin Flack, will be read with interest now that the commercial possibilities of aviation are something more than a dream, and the subjects of Efficiency and Fatigue and Fresh Air and Efficiency, respectively dealt with by Dr. H. M. Vernon and Professor H. R. Kenwood, are matters with which the new Ministry of Health will have much to do.

The lectures on Sex and Heredity deal with a somewhat abstruse subject in simple language. Scientific terms are freely introduced, but their definition is repeated in paraphrase again and again as occasion suggests, while abundant illustrations and a glossary further help the reader. No indication is given as to where or to what audience in Glasgow the lectures were delivered, but presumably they were given in the University, as two of the three lecturers are respectively Regius professors of botany and zoology there. The aim is to give the leading facts in relation to sex in animals and plants, together with suggestions bearing on the use and effect of sexual propagation, and this has been abundantly fulfilled. The lectures make a simple and admirable introduction to such subjects as race regeneration and eugenics, which, after the devastations of war, are likely to occupy the minds of thoughtful people for many years to come.

The Urethroscope in Diagnosis and Treatment of Urethritis. By Major N. P. L. LUMB, O.B.E., R.A.M.C. (T.C.). London: John Bale, Sons, and Danielsson, Ltd. 1919. Pp. 52 10*s.* 6*d.*

THIS book performs two useful tasks: First, it emphasises the necessity for the use of the urethroscope in all cases of urethritis; and, secondly, it gives to the practitioner some idea as to what he may expect to find by looking through the instrument. The illustrations, which are all coloured, are quite good, although perhaps a little diagrammatic in places, but suffer from the disadvantage that the references in the text necessitate a repeated turning over of pages. Still, this is a minor point. The advantages of the Wyndham Powell aero-urethroscope are wisely taken into account. The author does not pretend that the book is complete. It is a useful contribution in that it depicts in the illustrations the effect of treatment on the pathological condition found in cases of urethritis.

Ten Lectures on Field Sanitation. By C. B. MOSS-BLUNDELL, M.D., D.P.H.; Captain, R.A.M.C. (T.F.). London, Aldershot, and Portsmouth: Gale and Polden. 1919. Pp. 134. 5*s.*

THIS book, which has a commendatory introduction by Major-General Gerald Cree, contains a series of lectures delivered by the author at a school of sanitation in France of which he was the commandant, and their object is to teach the practical side of sanitation in the field. The lectures discuss the general principles which underlie the sanitary problem in active service, the details of the syllabus embracing the dangers from horse manure and the menace of flies, the disposal of excreta and refuse, the method of dealing with water-supplies, food, and disinfection. Diagrams are freely used in elucidation of the text. The author, who is county medical officer of health for Huntingdonshire, has brought to the compilation of the lectures a wide experience of sanitary matters gained both before and during the war, and his treatment of the subject will prove valuable, not only to R.A.M.C. officers, but also to officers in other branches of the service.

JOURNALS.

IN the *Military Surgeon* for July, Colonel B. K. Ashford completes a lecture on Field Hospitals, in which he tells the newly arriving officers of the American Medical Corps what they should aim at in providing accommodation for their wounded. The wounded sent back from the advanced dressing station are examined at the field ambulance and there sorted as to their next destinations. This sorting or, as the French call it, triage, must never be done except at a place where there is a chance of dealing with grave emergencies. Therefore, he says, in action the field ambulance must be able to deal with cases of hæmorrhage, shock, severe compound fractures, chest and abdominal cases, all untransportable, and consequently it must be strengthened in time of action by an advanced surgical section and a radiologist. He discusses the French and English field hospitals as he has seen them, and notes how field ambulances are in turn taken out of the line and made to do duty as gas hospitals, rest stations, hospitals for medical, infectious, or scabies cases. He gives high praise to the British for cleanliness. Never, he says, has he smelt fæces in the British lines; their latrines may never be near their kitchens, which, like the cooks, are spotless. Many trades were represented about the hospitals of rest—tailors, cobblers, saddlers. Much, too, was done for the comfort of the men, who had a gymnasium, library, entertainments, theatricals, and plenty of open air, so that 80 per cent. go back to their units. Colonel Ashford expresses a high opinion of the French Bessoneau tent, of their mobile surgical units, and of their hospitals for gassed cases. He notices that in one attack only some 15 of those supposed gassed were really so; the others were mentally and physically exhausted, but they, too, required treatment. In the same issue Major G. A. Soper recounts the history of the notorious "Typhoid Mary," who in 18 years is believed to have originated ten outbreaks of enteric while acting as a cook in various circumstances.

Journal of the East Africa and Uganda Natural History Society. July, 1919. London: Longmans, Green, and Co. 5*s.* 4*d.* to non-members.—This number contains two papers of medical interest, Major C. E. Southon's description of plague and its history, and Mr. R. E. Montgomery's story of insects in relation to the diseases of stock. Dr. J. H. H. Pirie has a note on the Eburru steam jets (natural emanations of hot aqueous vapour from the ground), some of which have been used for obtaining a water-supply, the steam being condensed on metal plates. Mr. V. G. L. van Someren sends some notes on East African birds and on the European crane, and Dr. R. van Someren is responsible for a group-picture of sacred ibis, cormorants, and stone curlew on an island on the Victoria Nyanza. A contributor asks whether albinism is only found among males in South Africa, as in the half a dozen cases he has met with he has never seen an albino woman, and another contributor describes an albino child at Mlalende, south-east of the Taita Hills; this boy was about 10 years of age, with skin and hair quite white. The eyes were of a watery blue, and he complained of the bright sunlight. There were marks on his face resembling very large freckles, and his lips were badly blistered by the sun. The boy seemed intelligent, and his father, mother, and two sisters were all quite black.

SOCIÉTÉ DE BIOLOGIE, PARIS.

AT a meeting of this society held on July 26th the following papers were read:—

Dubois.—Pseudo-cellules Symbiotiques Anaérobies et Pathogènes.

On peut obtenir des pseudo-cellules pathogènes et même des pseudo-tissus parenchymateux avec des photobactéries, mais cela ne peouve pas que les cellules animales ou végétales en général et en particulier les cellules pathogènes, soient formees par des agglomérations microbiennes.

Le Moignic et Sezary.—Lésions Pulmonaires Consécutives aux Injections Intraveineuses d'Huiles Végétales.

Des injections intra-veineuses uniques ou rarement répétées, d'une dose d'huile d'olive variant de 0,0·3 c.cm. à 0,2 c.cm. par kilogramme d'animal, ne déterminent que des altérations légères du poumon. Des injections répétées 15 à 30 fois provoquent une sclérose interstitielle diffuse, enserrant les alvéoles, diminuant notablement le champ de l'hématose. L'incorporation à l'huile de substances médicamenteuses produit des lésions graves de broncho-pneumonie nécrotique. L'huile camphrée seule est bien tolérée expérimentalement.

Le Moignic et Norero.—Recherches sur la Distribution des Huiles Injectées dans la Trachée.

On injecte à un gros chien par piqûre de la trachée de petites quantités d'huile colorée par des substances peu ou non diffusibles. Autopsie après 24 heures. L'huile ne se départit pas en definitive dans tout le parenchyme pulmonaire, elle se rend surtout à des lobules des parties inférieures du poumon; il est rare qu'elle se distribue abondamment au lobe supérieur.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 6, 1919.

The Future of Liquor Control.

IN view of the approaching extinction of the Liquor Control Board and the proposed establishment, in its place, of a permanent authority directly responsible to Parliament, special interest attaches to the speech delivered by Lord D'ABERNON at Carlisle last week dealing with the future of drink policy in this country. Lord D'ABERNON was in the position of being able to point to a record of successful administration in a difficult sphere where generations of reformers and legislators have failed. At a time when public opinion is showing itself much more alive to the shortcomings than to the achievements of the State in the many unusual activities thrust upon it by the war, the Liquor Control Board stands out as a department of the Government whose work during the national emergency has won general recognition not merely for its accomplishment of the immediate purpose for which it was created, but also as having made a contribution of permanent value to the solution of a notoriously difficult social problem. We know all the directions from which the Liquor Control Board has been criticised, but the fact emerges that when something had to be done the Board did it successfully. And readers of Lord D'ABERNON'S speech will not be at a loss to find the explanation of this success.

The history of liquor legislation in the past has been marked by an entire blindness to the fact that the problem of alcoholism is in a very large and important measure a problem of pharmacology. Lord D'ABERNON, with the intuition of statesmanship, and with the even more useful quality of being able to trust scientific advice, grasped this fundamental and neglected truth. The potential efficacy of legislation against intemperance depends largely on the fact that the conditions which physiology indicates as necessary to prevent the injurious action of alcohol appear generally to be such as can be adequately secured by legislation or regulative measures. When, for example, the physiologist teaches that alcohol gets into the blood very quickly and gets out of it very slowly, and that its persistent presence in the system is the main cause of chronic alcoholic poisoning, the obvious precaution is the quite feasible one of providing against public-houses being open for long continuous periods. Similarly, when it is shown that an alcoholic drink taken in dilution is very much less injurious than the same dose taken in an unduly concentrated form, the obvious precaution is to provide against the sale of alcoholic beverages at excessive strengths, and to bring about effective dilution by encouraging the consumption of alcohol with meals instead of offering dangerous facilities for drinking on an empty stomach. The regulation of the liquor trade in accordance with these principles has brought about a reduction of intemperance and a consequent improvement in national health and efficiency which a very few years ago would have appeared impossible of attainment by any practicable measures of reform, and the accompanying interference with the liberty of the subject cannot be described as a counterbalancing mischief. The lesson which Lord D'ABERNON draws from this experience is that the pre-war prevalence of alcoholism in this country was primarily attributable to the absence of any rational system of liquor legislation, and that, should relapse to these pre-war evils occur, it will similarly be the fault of the legislation. In this matter the immediate responsibility of the State is clear and definite: under the existing licensing system, the retailers of liquor are not traders in the ordinary sense of the term, they enjoy a monopoly granted to them by the State, and it is the duty of the State to regulate in the public interest the conditions under which that monopoly is exercised. In the United States the abuse of their privileges by the liquor traders has led the legislature to adopt the extreme policy of absolute prohibition. In this country the experience of the Control Board has shown that more moderate methods may be at least as effectual in safeguarding public health and order, while they have the additional advantage—of no small account at the present moment—that they do not involve the sacrifice of a source of State revenue which may be capable of such development as should make it second only to the income-tax in productiveness.

Whether the system of regulation by which certain beneficent results have been achieved during the war can be effectively carried out in peace time without the direct management of the liquor business by the State is a question which only experience can decide. The answer will depend, no doubt, in a very large measure on the capacity of the licensed traders to take an intelligent view of their own interests. With the example of America before them—where the intolerable abuses of the American saloon were the chief argument for prohibition—they should be able to appreciate the full force of Lord D'ABERNON'S epigrammatic warning that "the noisy advocates of unrestricted indulgence are the cats-paws of Pussyfoot." And it is equally desirable that the nation should realise the immediate and inevitable results of complying with the demands of these advocates. If we withdraw reasonable restrictions we shall create almost a legitimate demand for unreasonable ones.

Some Housing Questions.

THE influence which housing conditions exercise upon the incidence, spread, and permanence of disease is so enormous that no apology is needed for recurring notices of the developments now taking place. The housing problem is being dealt with seriously, and upon what is intended to be a scheme of general application, for the first time in this country, and this general application is, perhaps, indicated by the absence of any definition of the class of citizen whose need for accommodation is exercising the community at large. A series of questions has been addressed to Dr. ADDISON by the Council of Rotary Clubs of London, and other inquiries have been directed to this point. Dr. ADDISON, in reply to the Council of Rotary Clubs, said that he had deliberately "and obstinately" refrained from defining "a workman." "A type of house," he said, "is sanctioned, and it is left to the local authorities to use their own common-sense as to who shall occupy the houses." Dr. ADDISON was, however, betrayed into something very like a definition such as he had obstinately declined to give, for he

continued: "A workman is a man who works, and it is immaterial to me whether he works as a bank clerk or a navvy." This indicates at any rate that the honourable term of workman is not to be confined to manual labour, but it does not say with what strictness the new dwellings are to be confined to those who "work." Are they to be denied to the naval or military pensioner debarred by war injuries from work? Is the widow of a man who has saved a little money for her and his family to be excluded from them? Will a worker of any sort, in receipt of wages which fairly might enable him to rent a more expensive house, be made to do so? This last question was actually answered by Dr. ADDISON by saying that rents will be fixed according to the type of house, and cannot be graded according to the proposed tenant's earnings. Where there is competition for the new houses there will be a good field for the exercise of the common-sense with which we are willing to credit the local authority, and for allotting the new habitations to those for whose benefit they were provided. From the health point of view this may be of importance; competition for the houses will promote rivalry in keeping them decent, and once a neighbourhood begins to pride itself upon being clean half the battle of public health is won.

In London the conversion of houses into working-class flats will presumably be the branch of rehousing which will first show tangible results. Such conversion has taken place before, but not on the large scale now contemplated, and the securing of satisfactory health conditions will not always be as easy as the mere conversion itself. To turn a house, built to contain one middle-class family, into three or four self-contained tenements for workmen may dispose of that number of families so far as their lodging at night is concerned, but when streets or rows of houses are thus treated a comparatively crowded area will take the place of one more sparsely populated. The children have to be considered in places where the children of former occupants played in the back garden of the one house belonging to or rented by their parents and gave no cause for anxiety to anyone. We doubt the children of four families living in one house sharing its yard or garden harmoniously. Children will do better in larger playgrounds, where they can find friends adapted to their tastes and have some kind of supervision, official or voluntary, to keep them out of mischief. We hope that in all housing and building schemes the health and enjoyment of the children when out of school will be kept well in view, and recognised as an essential aid to the well-being as well as the happiness of the population. The streets and public roads in urban districts are not proper playgrounds whether for babies or for bigger girls and boys. A public park or playground may accommodate thousands and be an excellent place for holiday time, but at half a mile distance or even less it is of no use for every-day purposes. Small playing areas for the children coming from ten up to a hundred houses, standing open within easy reach, might make it possible to forbid absolutely their enjoyment of the danger of the highway.

The reconstruction of houses into flats should lead to increased housing accommodation more quickly than the construction of new buildings, but it is to the new buildings that the medical man looks for such a solution of the housing troubles as may lead to an actual improvement in public health conditions. Conversion of large houses into flats is an economical proceeding of itself and should have considerable advantages, because the quality of fabric is higher than may be available in these days. But no choice of site is left, and it is here and in the planning of the arrangements of roads and approaches that we look for the main improvements in the houses of the future. Much of the insanitary horrors of the existing workmen's dwellings has been due to the absence of any prevision in building; but now that housing and town planning are being carried out under the ægis of a Ministry of Health neglect of the real sanitary outlook should not be feared.

Dearer Milk and Bread.

GREAT and immediate efforts are needed upon the part of all local authorities to protect the population against the hardships arising out of a milk-supply at famine prices. Mr. MCCURDY, the Parliamentary Secretary to the Ministry of Food, in a speech delivered at a recent meeting of the Consumers' Council, issued a warning that it is probable that the retail price for milk throughout the country next winter will be at least 1*s*. a quart, which is an advance of 2*d*. per quart on last winter's rates. This will mean a heavy burden on the resources of the working-class families and, likely enough, a serious increase in the rate of infant mortality. "We have to make good," Mr. MCCURDY concluded, "the wastage of human life that took place during the war. Our baby crop for the years 1914 to 1919 is in danger. We must save it." It is well to remind local authorities of the powers conferred upon them by an order of the Ministry of Food last year. Subject to such conditions as might be laid down by the Food Controller, any local authority could arrange for the supply of milk for children under 5 years of age, and in necessitous cases such milk might be sold at less than cost price, or even supplied free. The dairy farmer, of course, must have a reasonable return, and with the increased cost of production and shortage of hay and roots the price of dairy produce must rise. It is to be hoped that the Government are taking steps to secure auxiliary supplies in the shape of dried milk, which appears to meet the dietary requirements of the infant quite well, and further attention should be given to the possibility of imitating milk by emulsion mixtures containing fat protein and carbohydrate, plus, of course, the vital accessory factors. Lastly, the healthy adult should cut down his accustomed supply of milk, particularly in tea and coffee, and thus place a substantial quantity of milk at the disposal of those who need milk if they are to live. Milk can well be excluded from the healthy grown-up person's diet without the slightest dietetic sacrifice, and all who thus penalise themselves will be rendering the State a great service by foregoing an article of food which belongs essentially to the young.

Less anxiety, perhaps, need be felt in regard to the dearer loaf, as the advance in price is relatively small and the staple constituent of bread—carbohydrate—can be made good by other commonly occurring articles of diet. It may be remembered that, in dealing with the operative bakers' grievances, the Court of Arbitration, having regard to the hours and wages of the workers and the factors governing the cost of production, concluded

that the demands of the operatives, which were reasonable, could be met by slightly raising the cost to the consumer of the 4 lb. and 2 lb. loaf by one halfpenny and one farthing respectively. This advanced price is solely due to the increase in wages conceded to the baker. The new prices are based still on a State subsidy, which provides against a greater rise in the price of the loaf. This subsidy, of course, comes out of the pockets of the tax-payers. The period of the war showed that the general health of the community was not seriously affected by the restrictions placed on bread allowance or by the modifications which were enjoined as to its composition. The shortage of carbohydrate in the form of bread was easily compensated by the supply, amongst other things, of rice and potatoes, and this was done with no harm to anybody.

The adult can deal with such a situation without much inconvenience, but not so the baby. The process of turning pasture into milk involves greater economic interests than are present in the growth of seed and the development of the tuber and cereal. For the latter source of food-supply the home allotments should be kept going, as though the war is over the difficulties of food-supply evidently remain. Intensive home cultivation has proved a great success, and no hindrance should be put in the way of continuing the undoubted assistance which allotments gave to the food resources of the country. Neither should the healthy occupation which the allotment involves be checked. But the problem of milk for children remains, and it can best be met by rigid economy in its use by adults.

Fees for Public Vaccination.

THE Association of Public Vaccinators of England and Wales has justified its existence in a number of ways. It has done much to promote a high standard of efficiency in the vaccination service; and although primarily concerned with the interests of public vaccinators and the conditions of service, the association has also been active in the defence of vaccination per se for many years. A deputation received by Major ASTOR at Whitehall during June stated—not for the first time—a case for improvement as regards fees and conditions of service for public vaccinators, and urgently called for a recision of the Act of 1907 which has been the cause of much neglect of vaccination by substituting a statutory declaration for the certificate of conscientious objection required under Section (2) of the Vaccination Act of 1898. Major ASTOR, in his reply, was by no means unsympathetic, and assured the deputation that he would lay all their points before the President of the Local Government Board, who would give them his most careful consideration. On July 14th the Association addressed a letter to the Minister of Health on the subject of the increase of fees payable to public vaccinators, and Sir ROBERT MORANT replied on July 24th:—

"I am to state that the Minister has it in contemplation to modify the existing Order by raising to 5*s.* the present minimum fee of 2*s.* 6*d.* or 3*s.* 6*d.*, as the case may be, for primary vaccination performed at the residence of the person."

We congratulate the Association upon its success in obtaining this concession, even though it be not immediate, for contemplation in Government offices may take some time to develop into action.

Annotations.

"Ne quid nimis."

HOME "DOCTORING" AND THE SPREAD OF INFECTIOUS DISEASE.

THE medical officer of health for Ealing has recently presented to his public health department an interesting report dealing with a local outbreak of scarlet fever. Of 25 cases in all, 18 were in children attending North Ealing school, 1 attending Drayton school, 1 a private school, and 4 were under school age. The outbreak began in May, two cases being notified in that month, one on May 6th and the other on May 9th. Further cases were notified on June 2nd, 11th, and 12th. To determine the actual source of infection Dr. T. Orr arranged that on June 18th the hands of all the children in the three classes in which scarlet fever had occurred should be examined, but no child was found to show evidence of infectivity. Absentees were followed up and one child was found whose hands were desquamating, and the mother said that the child had had a rash on May 30th. This child was in the same school class as the two cases notified on June 2nd and 12th. On June 21st all cases in the North Ealing area which had been notified during May and June as suffering from measles or German measles were visited, with the result that one child attending North Ealing School, notified as a case of German measles, was found to be desquamating in a manner typical of scarlet fever. On June 23rd and 24th every child in the North Ealing School was examined and three children in classes not previously examined were found to be desquamating, while one child, in a class already examined as far as the hands, was found to be desquamating on the chest. All these children were sent home and visited, when it was found from the mothers that in every case the children had had a rash from two to three weeks previously. Among the absentees who were also visited two other cases of missed scarlet fever were found, making in all eight cases which had been missed, one of these having been notified as German measles. After this a constant daily supervision was kept over all absentees, who were visited at home, their parents being warned in any cases of suspicious illness, with the result that three new cases were discovered at an earlier date than they would otherwise have been. Dr. Orr remarks upon the large number of missed cases, i.e., 8, in comparison with the number of notified cases, 25. The affected school is in excellent sanitary condition, but, continues Dr. Orr—

"I have been remarkably struck on my visits to some of the houses of the children found to be recovering from scarlet fever to find the mothers so full of knowledge as to what the children suffered from, a knowledge which was pitted against mine in discussing the nature of the condition, and which was gleaned ostensibly from some 'Family Physician,' a volume which was handed to me on two occasions to see on what authority they relied."

It is obvious that in such conditions as Dr. Orr describes we have an ideal position for the spread of scarlet fever or any other infectious disease. Scarlet fever is sometimes very easy to diagnose, and sometimes very difficult, or even impossible. An untrained observer, relying upon information gained from such a volume as Dr. Orr mentions, is subjecting the community of his or her residential neighbourhood to a criminal risk.

ACUTE THYROIDITIS.

To the *Albany Medical Annals* for June Dr. G. E. Beilby has contributed a careful study of a very rare condition—acute thyroiditis. It might be supposed that the proximity of the pharynx, tonsils, and lymphatic structures of the throat would predispose to infections of the thyroid by lymphatic extension. But it has been shown that there is no lymphatic circulation between the structures of the throat, which are so commonly the seat of acute infections, and the thyroid gland. Cases in which infection occurs by way of the lymph vessels seem to be always preceded by infection in the upper trachea or larynx. Infection from the blood-stream appears to be the most frequent cause of inflammation in cases of tumour or hypertrophy of the thyroid, the consequent processes of degeneration lowering the resistance. It is particularly in adenomata undergoing degeneration and containing free blood and necrotic material that infection occurs. The following is an example:—

A married woman, aged 33 years, the mother of three children, was admitted to the Albany Hospital on Jan. 10th, 1919. She first noticed enlargement of the neck four years previously, just after the birth of her youngest child. The enlargement was gradual until about six months ago, since which time it had been more rapid. The pressure of the growth caused discomfort, and at times difficulty in breathing. About three months before admission she had a severe attack of influenza. Before she left her bed her neck began to swell and to be painful, and there was a rise of temperature every day. On New Year's day she had a chill and from that time grew rapidly worse. Her breathing became more difficult and she lost her voice. On admission she was suffering from dyspnœa and dysphagia. She was profoundly septic and in a critical state. There was a large and very tense tumour in the median line of the neck, a little more prominent on the left side. The temperature was 103·5° F. and the pulse 120. Infected thyroid adenoma was diagnosed. Under local anæsthesia the mass was opened and a large amount of purulent fluid, mixed with blood and broken down thyroid tissue, escaped. Free drainage was instituted. Cultures of the fluid yielded a hæmolytic streptococcus. The patient was very ill for two weeks, but eventually was able to leave hospital with a small discharging sinus. This completely healed and she slowly regained weight and strength. She was advised to return later for removal of the adenoma. The adenoma had undergone cystic degeneration and the infection was undoubtedly hæmatogenous and part of the general influenzal infection.

Two other cases are related in which the infection of the thyroid was a direct extension from the throat, which was inflamed. The symptoms of acute thyroiditis vary according as the inflammation of the gland is primary or arises in some lesion previously existing. In the former case there are usually chills, malaise, and headache. Pain is felt in the region of the gland, more pronounced on one side, because the process usually begins in a single lobe, often radiating to the ear and side of the neck, lancinating and greatly aggravated by extension of the head. As a result the attitude may be somewhat characteristic, the head bowed and held very rigid. Local swelling is never noticed as an early or a marked symptom. Dyspnœa and dysphagia are present, the degree depending on the severity of the infection and the extent of gland involved. The voice may be affected; there may be aphonia and an irritative cough with slightly blood-stained expectoration. The diagnosis is usually difficult and the condition is unrecognised for a considerable time because the usual signs of inflammation and suppuration are absent. The gland is surrounded by a closely adherent connective tissue capsule derived from the pretracheal layer of deep cervical fascia. A layer of the capsule also encloses the larynx and trachea and pharynx and œsophagus. Hence the swelling of the gland produces its first and most marked effect upon the trachea and œsophagus. The cause of the resulting stenosis is usually sought in the throat. But there is a pathognomonic symptom—stony hardness of the gland on palpation. As the condition of the throat renders administration of a general anæsthetic difficult and dangerous, operation should be performed under local anæsthesia. A free opening should be made and drainage established. As little injury as possible should be done to the gland, and no extensive measure, such as partial excision or removal of tumours or cysts, undertaken in the presence of such serious infection.

THE PLIGHT OF HOSPITALS IN AUSTRIA AND HUNGARY.

AN appeal drawn up by Dr. Hilda Clark, who has recently joined Dr. Hector Munro in Vienna, brings up to date[1] the urgent conditions of want in which the hospitals of Austria and Hungary find themselves. In both these countries, while the standard of professional skill and permanent equipment remains very high, the staff is faced with the impossibility of giving their patients the treatment which they require. In Vienna, where the hospitals are maintained by the State, milk and eggs are only provided for infants under 1 year, as although the cost at which these articles can be obtained in the country is lower at the present rate of exchange than the prices which are paid for them in England, the State is too poor to buy them and other requisites. The hospitals have therefore to carry on without linen, surgical dressings, rubber appliances, drugs, anæsthetics, soap, or disinfectants. Paper clothing and bandages are everywhere in use, better dressings being reserved for very special cases. The shortage of coal and gas has reduced the opportunities of sterilisation far below the limit of safety. In Budapest a sudden crisis in the food position, which up to that time had been better than in Vienna, was produced by the Roumanian occupation. The shortage of hospital requisites, including dressings and drugs, and the limited opportunities of sterilisation were, however, already more acute in the Hungarian capital. Some spread of sepsis and of skin diseases in the general wards and an increased morbidity rate in the maternity wards has so far been one of the results. The lack of anæsthetics has been partially met by the extended use of local anæsthesia, but it is obviously impossible for the whole medical profession to acquire at a moment's notice the skill and experience thus necessitated. The shortage of general anæsthetics and of morphine has been particularly felt in the obstetric clinics. The appeal suggests help in three directions. The first essential is coal, which can presumably be paid for on credit if not in money; secondly, some help with the hospital supplies is urgently needed; and thirdly, assistance to the hospitals and sanatoriums to cope with the increase in tuberculosis, to be continued until industry regains a proper footing. Another problem which vitally affects the health of the people in both countries is the shortage of clothing. The supply of new material on credit for the manufacture of clothing on the spot would, in the opinion of the signatories, meet the risk of demoralising by the giving of help. Relief for all the hospitals in

[1] See THE LANCET, August 2nd, p. 208.

Austria and Hungary is being administered through a representative medical committee, under the chairmanship of Professor Wenckebach, professor of internal medicine in the University of Vienna, with offices at Singerstrasse 16, Vienna I.

MENTAL DEFICIENCY IN PROSTITUTES.

Lieutenant Paul A. Mertz, psychological examiner at Newport News, one of the principal ports of embarkation and debarkation of the American army, records[1] the results of his psychological examination of women arrested for prostitution and similar offences in the course of six months. It is noteworthy that 74 per cent. of the white women and 79 per cent. of the coloured women were found to be infected with a communicable venereal disease. Of 69 women whose ages were obtained, 50 per cent. were under 21 years of age, and over half of these were between 18 and 20. In 126 women in whom the mental age was determined by the Binet-Simon scale, 53 per cent. had a mental age of ten or under, this figure closely agreeing with the 51 per cent. feeble-minded reported by the Massachussetts Commission for the Investigation of the White Slave Traffic in its examination of prostitutes. At the Chicago Morals Court the percentage of mental deficiency among 126 prostitutes was still higher—85·8 per cent. Only 10 per cent. of the cases, however, examined by Mertz were so deficient as to warrant under existing laws segregation in an institute for the feeble-minded. In addition to the mentally deficient, 15 per cent. of the cases showed mental disorder, 11 being emotionally unstable, three epileptic, one a drug addict, and two subjects of dementia præcox. As only few opportunities were given for detecting deviations from the normal, this number is probably considerably understated. The ignorance of the prostitutes, according to Mertz, was appalling, and therefore it is not surprising to learn that 50 per cent. of the women did not reach the fifth grade at school.

THE FIRST ANTITUBERCULOSIS DISPENSARY AT NAPLES.

ON June 1st there was inaugurated at Naples, in the Piazza Salerno, near the industrial quarter, the "Preventorium pro Salute," instituted by the Neopolitan Antituberculosis Society. According to *La Riforma Medica* this is the first of the three dispensaries that the society intends to establish in various parts of the city; the second will be built during the present year on a suitable site in the hospital area in the centre of the town, while the third will be erected next year in the western quarter. These represent part of the social programme which has been determined on in order to encourage methods of prophylaxis adapted to the special conditions of the city; later on the other preventive institutions of the society will be added —namely, day sanatoriums, floating sanatoriums, country camps, and open-air schools—leaving to other antituberculosis associations the task of providing permanent sanatoriums and seaside hospitals. It must be acknowledged that the installation of three dispensaries in two years in a city where none previously existed is a record of rapidity and energy which has only been possible when the artificial barriers of small committees have been broken down and in their place a powerful organisation set up, such as the Neapolitan Antituberculosis Society with its committee composed of such men as Professors Bianchi, de Giaxa, and Jemma, and a band of commercial and industrial men and women well versed in practical philanthropy. The dispensary consists of a central block and two wings, the former having in front a large waiting hall communicating by three openings with a corridor leading respectively to bathroom, surgical and laryngological rooms. The left wing contains an office for the registration of patients, a large laboratory and X ray room, while the right, which faces the south, is occupied by the dispensary, and two ample medical rooms. In the basement are washhouses and stoves for disinfection or destruction. Over the wings are spacious terraces for heliotherapy, while the whole front leads on to a large garden. The medical staff, two of whom are volunteers, are assisted by ladies, who undertake the difficult task of domiciliary visiting for which they are made efficient by a special course of lectures held at the Institute of Hygiene in the University. The choice of a locality for the dispensary, isolated in the middle of a large open space close to the industrial quarter, is happy, and the beneficence of the project and the lavishness of its details have aroused the most enthusiastic approbation of all competent judges. The sound organisation is the outcome of the long study of an expert committee of management presided over by the superintendent, Professor de Giaxa.

THE WELFARE OF THE BLIND.

THE welfare of the blind is a matter of pressing importance, even more pressing to-day than heretofore, on account of the large accession which has been made to the ranks of the blind by the ravages of war. Loss of sight is one of the most serious disabilities which can affect humanity, although there are well-known instances of blind persons, such as Milton and Henry Fawcett, who were able to do good work after having lost their sight. When blindness is accompanied by deafness, as too often happens—the latest figures as given in the Report of the Advisory Committee on the Welfare of the Blind, dated June, 1919, show that there were in England and Wales 1009 deaf blind persons, of whom 660 were reckoned as "unemployable"—the disability is enormously increased. We therefore refer again with pleasure to the publication of a circular by the Ministry of Health, dated August 7th, from which we learn that an estimate has been laid before Parliament for a grant to be distributed in aid of certain services carried on for the benefit of the blind. If voted by Parliament this grant will be appropriated in aid of these services from the period July 1st, 1919, to March 31st, 1920, and thereafter, subject to the consent of Parliament, a grant will be payable in respect of each financial year ending March 31st. Grants will be payable to approved agencies (an "agency" is defined as an institution, society, or body engaged in work for the blind) in respect of the following services: workshops for the blind, provision of assistance to home workers, homes and hostels for the blind, home teaching, book production, counties associations, miscellaneous. In regard to the first two services, grants will be allocated at rates not exceeding £5 to £20 per annum per worker or per blind person incapable of work who is cared for in a home. Provision is made for granting to any home teacher employed by

[1] Journal of the American Medical Association, 1919, lxxii., 1597-99.

an agency a sum not exceeding £78 per annum, and grants will be made to any approved agency producing books and music in embossed type. Under the head of "Miscellaneous," we see that the Minister will be prepared to consider applications from an agency for a grant towards expenditure incurred or estimated for any service other than the services mentioned in the regulations, and we earnestly hope that training in music will be considered by the Minister as suitable for a grant, for a blind man who can play a musical instrument with skill is not only a source of great pleasure to himself but may be so also to his fellows. Everyone will remember Thackeray's pathetic account of George III.—old, blind, and mad, solacing himself with Handel. If the suggestions made in the circular are carried out then the lot of the blind will be made appreciably easier than we fear it is at present.

MASSAGE AND MASSEURS.

A PETITION to His Majesty in Council has been presented recently to the Board of Trade begging that a charter may be granted to a society to be known henceforward as the Chartered Society of Massage and Medical Gymnastics. The object of the proposed society is to unite the older Incorporated Society of Trained Masseuses, founded in 1894 and incorporated in 1900, with the more recent foundation of the Institute of Massage and Remedial Gymnastics, which was founded in 1916. Such an application has been *in posse* ever since September, 1918, and we can but repeat what we wrote upon the subject in our issue of Sept. 21st, 1918, that it should protect the title of masseur from fraudulent usurpation; and while the council of the new amalgamation should be empowered to coöpt as members all those who can produce satisfactory evidence of training in recognised schools abroad, they must take steps to examine those whose training appears deficient. Only thus can the public be protected from the danger of the uninstructed dabbler in remedial gymnastics, while the elimination of the quack will be in the interest of all genuine masseurs.

GENERAL PARALYSIS AMONG JEWS.

GENERAL paralysis of the insane is stated to be a modern disease amongst Jews. Whilst epilepsy has been notoriously rife amongst them from an early date, being mentioned, indeed, by the Talmud writers, general paralysis has practically only occurred in the last 50 years. Sichel[1] finds the reasons for this state of things in the social and religious seclusion in which this people lived from mediæval nearly up to present times, and in their former habit of early marriage. The older Jew was of strict sexual morality. It is quite plausible, therefore, that the Jew suffered less often from syphilis and its sequelæ than did the Gentile. But if a change in life conditions favoured and actually produced more frequent syphilitic infection, then conceivably the type of the disease might be more severe in a race long unfamiliar with it. The same conditions, a pent-up life continuing for many generations, which have resulted in familiarity with tuberculosis, followed by some slight racial immunity to it, have, on the other hand, resulted in unfamiliarity with syphilis and consequent lack of resistance; in particular lack of resistance on the part of the cerebral tissues. At any rate, the facts of the case will bear some such interpretation. In the first place, the increase of general paralysis coincides in date with the Jew migration from small towns and villages into the great cities, Berlin now containing a quarter of all the Jews in Germany, and New York over a million American Jews. Big cities, of course, offer opportunities for impure sexual commerce, and the life in them is exhausting to the nervous system. In Vienna two different alienists found 20 per cent. of Jews among their general paralytics, and the disease in the whole of Austria occurred more frequently by nearly a third in Jews than in Gentiles. The same phenomenon appeared in London (Beadle), and in Frankfort. However, Russian Jews have (or perhaps one should say had) been compelled to be urban dwellers, agricultural pursuits being forbidden them. Yet general paralysis was rarely observed in their community. The explanation of this is probably that the Eastern Jew is more of the primitive national type than his Western brother, and keeps more strictly to Biblical and Talmudic precepts as to early marriage and pre-marital continence. The Talmud enjoins that every member of the religious community shall be married at 20 years of age. Western social life, especially urban, tends more and more to make such a precept, especially in the upper classes, quite impossible of fulfilment: the age of marriage is commonly much nearer 40 than 20, and pre-marital continence is consequently very much rarer, syphilitic infection very much commoner. It is further confirmatory that general paralysis in Jewish women is as uncommon as in Gentile women: the increase spoken of only occurs in males. Again, it is suspected that alcohol as well as syphilis has a place in the ætiology of general paralysis—it may be an important place, for Mohammedans, who are often syphilitic, but rarely alcoholic, suffer very little from paralysis. Formerly Jewish commercial travellers were those of their nation who suffered most with the disease, but this well-nigh exclusive incidence in one occupation has progressively declined, artisans and the labouring class having become more and more affected. The disease is becoming, as it were, popularised. At all events, the breaking down of national seclusion and tradition has run very closely with the decline in freedom from general paralysis, and the arguments advanced do, as far as they go, suggest a certain measure of causal connexion between the two processes.

[1] Max Sichel: Zeitschrift für Sexualwissenschaft, June, 1919.

KÖHLER'S DISEASE OF THE TARSAL SCAPHOID.

THIS condition is described by Dr. F. W. O'Brien,[1] of Boston, who reports a case in a girl, aged 3 years, as probably a non-infectious process, seen only in children and characterised clinically by swelling of the foot, pain on palpation and weight bearing, usually without constitutional signs and with some history of trauma. The disease appears to be due to delayed development of the ossification of the scaphoid, which is stimulated to osteogenesis by traumatism, and the pain and swelling may be due to post-traumatic osteitis. Less than 20 cases have been recorded since Köhler first reported three cases of the disease in 1908. It is probable, as Dr. O'Brien remarks, that both before and since it was frequently mistaken for cold tuberculous abscess. The diseased scaphoid

[1] Boston Medical and Surgical Journal, 1919, clxxx., 445-7.

presents the following X ray appearances: (1) It is one-half to one-quarter smaller than usual; (2) its form is entirely regular; (3) its architecture cannot be recognised, the cortex and spongy portion running together; (4) its density is increased two- to four-fold. The prognosis is invariably good, and recovery takes place independently of treatment, though the disease may last two or three years. Rest or support in some form is usually employed.

THE STUDENTS' NUMBER.

WE wish to thank all those who helped us so promptly in the production of the Students' Number of THE LANCET, which appeared last week. We desired to revert at the earliest opportunity to our practice for the last 60 years of issuing shortly before the commencement of the October session an educational guide to the medical profession for the use alike of those who are joining it, those who are in it, and their relatives. Circumstances will compel us from time to time to add to the statements made in the last Students' Number, as many things were in course of deliberation and rearrangement at the time of issue. For example, there were published on Saturday last from the India Office new announcements concerning appointments to the Indian Medical Service. The announcements include the new rates of pay, and those are the same as we were able to publish; while the information in respect of the vacancies and of the circumstances qualifying the applications are now published in another column. We regret as yet to be unable to publish the new rates of pay in the Army Medical Service.

The following corrigendum has been brought to our attention. The Branch Medical Council office for Scotland of the General Medical Council is now situated at 20, Queen-street, Edinburgh, and Mr. T. H. Graham has succeeded Mr. James Robertson as Registrar.

THE STING OF THE BEE AND THE WASP.

THE grave symptoms which sometimes follow the sting of a wasp or bee render the observations of Mr. Edward R. Speyer, M.A., F.E.S., Investigator of Diseases of Trees at Oxford University, in a letter in the *Times*, of great interest. Little is known really of the nature of the poison of these insects, but it was for long accepted that the chief toxic agent was formic acid and that, therefore, the prompt application of an alkali to neutralise the acid, such as ammonia or the blue bag, avoided serious consequences. However effective that method may be in the treatment of a bee-sting, it is not only unsound in the case of a wasp-sting, but is likely to aggravate the toxic effects of the subcutaneous injection, for Mr. Speyer now shows that the sting of the bee is decidedly acid, while that of the wasp is distinctly alkaline. If, therefore, the toxic factors are an acid in one case and an alkali in the other, the choice of a neutralising agent is clear, depending upon the particular insect which discharged the venom. But it is doubtful whether the issue is as simple as this, for toxins, apart from any question of alkali or acid, though these may respectively be effective vehicles of toxins, are not negatived by simple acid or alkaline applications. The case of the toxin of the serpent fang may be quoted. Still, the evidence is interesting that by extracting the stings of wasps and immersing them for a short time in an acid no ill-effects resulted when they were driven as deep as possible into the flesh. We have ourselves observed that water in which wasp-stings had been immersed becomes distinctly alkaline, and, further, that the prompt application of vinegar as the nearest acid in domestic service will prevent inflammation. Onion juice, which is acid, acts similarly, and no doubt other acid vegetable or fruit juices would answer equally well. That the bee-sting is acidic and the wasp-sting basic is an interesting differentiation which should be widely known, for not uncommonly the sting proves to be not a simple puncture but the beginning of a toxic process sometimes fatal. A wasp-sting on the moist mucosa, as in the mouth, invariably leads to serious inflammation, with most distressing results. If the simple gargling or washing of the attacked spot with an acid fluid in such a case keeps down the swelling lives may well be saved. The season of wasps is with us, and these observations are therefore opportune. Amongst gardeners there is the belief that the wasp draws its venom from young laurel leaves, which are rightly reputed to contain prussic acid. Wasps certainly are fond of the laurel leaf, but while it seems certain that prussic acid is not the business element of their sting this acid may be the foundation of basic nitrogenous bodies of a toxic nature passed on by the sting. It will be remembered also that wasps, different from bees, are voracious flesh eaters, and meat materials easily enough give rise to basic substances.

THE death is announced of Dr. Alexander Macalister, F.R.S., professor of anatomy in the University of Cambridge, and a member of the Senate of Dublin University.

Two cases of rabies have occurred in the Colchester borough, one on August 15th and one on August 17th, and a third suspected case is now reported. No case of rabies has occurred in the administrative county of Essex.

THE Ministry of Health were notified on August 19th by the deputy medical officer of health of the Port of London Sanitary Authority that a member of the crew of the s.s. *Clan Lamont* was suffering from plague. The vessel was then in dock, but has since been taken into the river and fumigated. The clinical symptoms of the patient are those of plague, but the bacteriologist of the Ministry has been unable to verify the diagnosis, and no plague-infected rats have been found on the vessel. No further cases of illness have occurred on board, and the ship has sailed from the Port of London.

NATIONAL PHYSICAL LABORATORY.—The Lord President of the Council has appointed Professor Joseph Ernest Petavel, D.Sc., F.R.S., M.I.Mech.E., &c., to be Director of the National Physical Laboratory in succession to Sir Richard Glazebrook, C.B., F.R.S., who retires on reaching the age limit on Sept. 18th next. Professor Petavel is professor of engineering and director of the Whitworth Laboratory in the University of Manchester. He is a member of the Advisory Committee for Aeronautics of the Air Ministry. He was educated at University College, London, and undertook scientific research at the Royal Institution and at the Davy Faraday Laboratory until 1898. He was elected John Harling Fellow of the Owens College, Manchester, in 1900, and was scientific manager of the Low Temperature Exhibit of the British Royal Commission for the St. Louis Exhibition, 1904.

AMERICAN MEDICAL GATHERINGS.

THREE important medical gatherings were held in the United States of America during the month of June. The seventieth annual session of the American Medical Association, which took the form of a "victory meeting" at Atlantic City, from June 9th–13th, has already been reported in THE LANCET.[1] There remain for brief comment the twentieth annual meeting of the American Therapeutical Society, the sessions of which, on June 6th and 7th, preceded the victory meeting at Atlantic City, and the Congress of American Physicians and Surgeons, of which the eleventh triennial session occupied June 16th and 17th at the same city.

At the American Medical Association the afternoon of June 11th was devoted to various aspects of industrial hygiene and their relation to public health, and this discussion, at which Dr. H. E. MOCK (Chicago) presided, merits attention.

Dr. W. J. CLARKE (Worcester, Mass.) dealt with

Preventive Surgery as Demonstrated by Industrial Practice.

In the treatment and repair of hernia the question often arose whether the condition was to be classed as an industrial accident. He had found that the sac was often congenital, and there was a distinct racial susceptibility. The question of recurrence was a difficult one. He often saw a sac adherent to the cord, with a small neck, and after amputation of the sac, although the repair appeared to be without a flaw, yet the patient was apt to come back later with a recurrence. No man with a definite bulge should be put to do heavy work.

Dr. W. S. SHERMAN (Pittsburgh, Pa.) said employers were coming to realise the importance of keeping their workers fit, and the immense loss entailed to industry by illness. Fortunately, injuries received in the steel mills were often sterile, as coal, coke, and iron did not produce infection. Dakin's hypochlorite solution, used according to the Carrel technique, had been found a useful solvent of necrotic tissue.

Dr. O. P. GEIER (Cincinnati) indicated how the industrial surgeon might stimulate the patient to seek early advice from an outside surgeon—e.g., in cases of neoplasm or appendicitis.

The PRESIDENT said that the timely examination and removal of diseased tonsils might save such complications as appendicitis and gall-bladder invasion, and even rheumatisms. This was an important side of industrial prevention.

Dr. J. W. SCHERESCHEWSKY (U.S. Public Health Service, Washington, D.C.) stated his belief that intra-abdominal pressure was the result of opposition to contraction of abdominal muscles. The development of musculature had much to do with the prevention of hernia and its recurrence. With impaired tonus relapse must take place.

Dr. C. E. FORD (New York) dealt with

Industrial Medical Practice and Sickness Prevention as a Factor in Public Health.

Some years ago the employment of a physician was regarded as benevolence on the part of the employer. It was now beginning to be understood that industry would best be benefited by the employment of qualified physicians. Part-time service was of little use. Men adapted to undertake this work were those who had seen at least five years' general practice, had had experience in health department and dispensary work, with opportunity of acquiring the social view-point. Sanitation, nuisances, garbage disposal, sewage disposal, flies, housing, prevention of infection were all subjects of great educational importance. The frank discussion of venereal disease, the control of tuberculosis, the necessity of rest, and the like, were all matters of vital importance. Educational films could now be obtained at a very moderate cost. In a survey of the funds spent by 99 leading industries he found that $2.50 was being spent per head annually in this way.

Dr. W. A. SAWYER (Philadelphia) said that there were approximately 30 million industrial workers in the United States, and industrial medicine served to reach a class that could be reached by no other means. There should be coöperation between public health workers and industrial physicians.

Dr. D. L. EDSALL (Boston) stated that at the Massachussets General Hospital a survey of patients attending the occupational clinic showed that in 5000 cases, or one-tenth of the total attending, occupation had something to do with the disability. The average industrial worker was said to lose eight days in the year from sickness. The opportunity for community service by the industrial physician was illimitable.

Dr. C. HASTINGS (Toronto) gave his experience of the department of industrial hygiene started four years ago in that city. "Show," he said, "the employers of labour how the loss of 10 to 15 per cent. of efficiency in the employee could be saved, and they would be willing to put in good ventilation or any other desired improvement."

Dr. A. WADSWORTH (Albany, New York) spoke of the need for industrial physicians to avail themselves of the facilities offered by the State for laboratory examinations. Systematic examinations in the venereal diseases would be of great industrial service, but if a demand for the work arose there was no doubt that the legislature would see fit to appropriate the proper funds.

Dr. SCHERESCHEWSKY enumerated six lines along which federal management of industrial medicine had been planned:—

(1) Extension of health service in industries to determine extent and means of correcting health hazards; (2) development of system of medical and surgical supervision of employees; (3) securing reports of the prevalence of disease among employees and sanitary conditions in industrial communities; (4) establishment of minimum standards of industrial hygiene and prevention of occupational diseases; (5) improvement of sanitation of industrial communities by cooperating with State and local health authorities and other agencies; (6) medical and sanitary supervision by public health service of industrial establishments owned or operated by Government.

Dr. GEORGE A. SOPER (Sanitary Corps, U.S. Army) dealt with

The Efficacy of Measures for the Prevention of Disease.

Of the three great lines of effort—namely, sanitation, public health administration, and personal precautions—only the first two had been developed. Respiratory infections were ten times as numerous as the exanthemata, and personal precautions were the largest factor in this question. Disinfection had come to take a secondary place, and proper ventilation and a high standard of cleanliness had been found of first importance. The soldier had been taught how to take care of himself. The time to study respiratory infections was before the attack appeared. It was for the individual to learn that the lessons of the Army were not for the Army, but to be appropriated by the whole world in times of peace.

Colonel KRAMER (U.S. Army) feared that unless the medical profession approached industrial hygiene in a more scientific and thorough manner they might lose control altogether, as the work was being done most efficiently by sanitary engineers.

Dr. L. I. HARRIS (New York) said it was a pity that after many enthusiastic meetings nothing was done. Resolutions ought to follow the matters discussed and the advice obtained carried out.

Dr. SCHERESCHEWSKY said that the responsibility rested with the community itself. The State and national boards were there for guidance and control. The individual citizen must play his part in demanding the best conditions.

Dr. SOPER, in closing the debate, regretted that only about 70 per cent. of the population were included in the vital statistics of the United States.

The scientific section of the American Therapeutic Society on June 6th opened with an address by Dr. DOUGLAS VANDER HOOF (Richmond, Va.), the President, on

Therapeutics and Gastro-Intestinal Disorders.

In making a diagnosis of gastro-intestinal disorders the services of the internist, the roentgenologist, the oculist, the neurologist, or the surgeon, were, he said, often required. 1000 private cases (excluding definite lesions of the alimentary tract) in which the patients complained of "indigestion" were studied and the causative factors tabulated. Laboratory analyses and X ray pictures were made in all cases, and a Wassermann test was performed. Where

[1] THE LANCET, July 12th, 1919, p. 78.

the presence of more than one lesion was demonstrated the condition most likely to be the causative factor was tabulated. The most frequent cause was found to be chronic appendicitis (one-fifth of all cases); this, with gall-bladder lesions added, made one-third of all causative factors. Peptic ulcer formed one-tenth of all cases. Kidney and heart involvement, one-tenth. Cancer cases formed less than 4 per cent. of the whole. Hypo-acidity was present in about one-sixth of the cases. As regards symptomatology, loss of appetite, though an important symptom in children and in animals, was not prominent in adults on account of the number of artificial stimulants to produce appetite. Coated tongue exhibited no relationship to affections of the stomach. An analysis showed that the same proportion was found in hypo- and hyper-acidity, and that 62 per cent. of perfectly healthy persons had coated tongues. The causes seemed to be: (1) nasal obstruction; (2) absence of friction (as in liquid diet) and where the arch of the palate was very high; (3) perversion of salivary secretion, probably the most common cause and often found in neurotic individuals. Nausea and vomiting were common and found to be due to: (1) toxic states; (2) reflex disturbances from eyes or ears; (3) pharyngeal irritation as in alcoholics and smokers; (4) habit vomiting; (5) brain and spinal cord lesions. These were not frequent in gastro-intestinal disease, except in pylorospasm. Hæmatemesis indicated peptic ulcer or obstruction of the portal circulation. Flatulence was due in most cases to the eructation of atmospheric air that had been swallowed. Abnormal secretion of mucus in the stomach was a protective adaptation against irritating ingesta. Similarly, mucus in the stools was a protective measure of the intestine against the irritation of cathartics. The first treatment for this condition was complete rest for the bowel. Then treatment by belladonna and mineral oil would effect a cure. Indigestion would be found to be caused, not so much by the food eaten as by the state of the gastric nerves during eating. As regards therapeutics, drugs had their place; belladonna was indicated in pylorospasm and digitalis in chronic passive congestion of the liver. In some cases psychotherapy was called for.

Discussion.

Dr. T. F. REILLY (New York) said that the last place to look for stomach symptoms was in the stomach itself.

Dr. JACOB DINER (New York) spoke of kidney lesions as the cause of indigestion; these were usually of the chronic interstitial or parenchymatous kind. In the very poorest dispensary class in New York City 65 per cent. of all complaints was of indigestion, and upon investigating the teeth large pus pockets and alveolar abscesses were frequently found. If these people would have their teeth looked after the indigestion disappeared of itself.

Dr. O. T. OSBORNE (New Haven, Conn.) laid emphasis on the character of the food taken. Many persons undoubtedly were eating wrongly. In order to gain weight young people were apt to drink milk as they would water with solid meals, thus putting too much work on the stomach. The giving of digestives, as such, outside of needed hydrochloric acid, was rarely necessary.

Dr. F. M. POTTENGER (Monrovia, Calif.) discussed the question from the standpoint of histology and neurology. Stimulation of the vagus nerve caused increased tension throughout the whole gastro-intestinal tract. Thus, with increase of tension the whole syndrome of appendicitis might be produced, as well as that of hyperchlorhydria. The stimuli did not explode in all individuals at the same time, and appendix stimulation might produce increased acid and motility of the stomach or intestinal tract with irregular contraction and pain in one case, or it might produce intestinal stasis with resulting biliousness in another. A large group of people were vagotonics. The main point in stomach indigestion was to find out whether the case was due to sympathetic or to vagus stimulation.

The regular sessions of the Therapeutic Society were devoted to a discussion on Physiological Researches in their Relations to Therapy, introduced by Dr. J. C. HEMMETER (Baltimore) and Dr. R. T. MORRIS (New York); on Glandular Therapy, introduced by Dr. E. B. MCCREADY (Pittsburgh) and Dr. A. A. LESCOHIER (Detroit); on Thoracic Affections and their Management, when papers were read by Dr. H. C. GORDONIER (Troy, N.Y.) and Dr. E. ZUEBLIN (Cincinnati); and a symposium on Epidemic Influenza, to which Dr. F. E. STEWART and Dr. H. C. WOOD, jun. (Philadelphia), Dr. J. DINER, and Dr. N. P. BARNES (Washington) contributed.

The Present Teaching of Therapeutics.

At the concluding session Dr. S. L. DAWES (New York) gave an address on the Present-day Teaching of Therapeutics. Medicine, he said, had now become a science more or less exact, teaching being based more upon careful statistical data, case-histories, hospital records, laboratory findings than upon exposition of individual opinion. Students were taught to carry out a Wassermann reaction, to do a spinal puncture and examine stomach contents, to differentiate typhoid and paratyphoid, and to have intimate acquaintance with calories, opsonins, and vitamines; but excepting in surgery the cure of disease had become a secondary matter. Materia medica was not taught and therapeutics, with a few notable exceptions, ignored. The pendulum had swung far from the practice of polypharmacy and "shot-gun" prescriptions. The first assault of any magnitude upon this part of the curriculum was made by a clique of medical politicians who arranged the passage of the Medical Practice Act of 1909, when materia medica and therapeutics were removed from the list of subjects in which a candidate was required to pass in order to practise medicine, with the result that osteopaths could practise without any examination of any kind. Not one of the larger medical schools now taught materia medica, and pharmacological teaching consisted for the most part in studying the action of drugs on animals, and did not include the properties and dosage of drugs, their methods of administration, and their incompatibilities. Only two of the first-class medical schools taught applied therapeutics, in most of the 15 it was taught as an accessory. What wonder, therefore, that the practitioner gave fever tablets, kidney pills, coryza tablets, heart tonics, hepatic stimulants, and anti-this and anti-that, while the public crowded the waiting-rooms of osteopaths, cheiropractics, Christian scientists and charlatans, or turned to religious newspapers to read the statements of ex-Statesmen and clerical incompetents as to the value of some patent article. The full-time teacher had pushed out the experienced clinician.

An animated discussion followed, in which Dr. VANDER HOOF, Dr. DINER, Dr. REILLY, Dr. OSBORNE, Dr. C. E. DE M. SAJOUS, Dr. H. WOOD (Philadelphia), and Dr. POTTENGER took part.

The meetings of the Congress of American Physicians and Surgeons occupied two afternoons, of which the first was devoted to the Surgical, and the second to the Medical, Aspects of Reconstruction.

Dr. SIMON FLEXNER (New York) delivered the presidential address on

Epidemiology and Recent Epidemics,

basing his remarks on the wave of poliomyelitis which passed over New York and contiguous States in 1916, leaving its mark on a portion of the population during the lifetime of the youngest individuals. Medical literature afforded no parallel for that epidemic. 20,000 cases were recognised, of which one-fourth recovered and one-half are still suffering from the consequences of the disease. In 1917-18 there appeared in the camps of the country, spreading thence to the civil community, an epidemic streptococcus infection, localised in the lungs and affecting the pleura, creating a large amount of sickness and disability among troops, and resulting in many deaths; this infection increased in severity as the disease progressed. But these two visitations were mild and inconspicuous in contrast with the great epidemic of influenza, which caused so many more deaths than the war that the two calamities were hardly to be compared. And yet the havoc of disease left the great mass of people unmoved. It was the duty of the medical profession to ensure that the attitude of the people towards disease calamity was similar to that adopted towards ill-government. In regard to poliomyelitis we had two pieces of essential information—the nature of the germ and its dissemination—but there were things about the microbial origin of this disease which were still hidden. It was not enough for the germs to be identified, there were qualities of virulence, subject to fluctuations and variations, and called forth by circumstances over which we had as yet no control. These phenomena were by no means incapable of being discovered, but results could only go just so far as the public

mind was ready to receive knowledge and to adopt measures which flow therefrom. In regard to the epidemic of influenza, we were confronted with the question whether of that disease we had the essential fundamental knowledge. Epidemics of influenza had been recorded since about the sixteenth century. The great outbreak of 1889–92 coincided with the discovery of the Pfeiffer bacillus, fairly accepted by the world as the cause of influenza. But to-day the position of the Pfeiffer bacillus was not as strong as it was in 1892. The development of laboratories as accessories to medical practice had brought a practical knowledge of epidemic problems and of the application of knowledge to clinical purposes. If it had not been for the disorganisation of forces due to the war there would doubtless have been a frontal and massed attack on the problem. If scientific opinion was still uncertain as to the rôle of the Pfeiffer bacillus, the disease was at all events well under investigation, and certain lines of work, not yet published, were likely to have a profound effect on our views of the microbial origin of the disease. There was a movement towards the belief in a filterable or invisible micro-organism, but the evidence that this type of virus was related to the disease should be just as complete as in the case of a visible organism. The cause, whatever it was, of influenza was mysterious and elusive. It attached itself to persons and was carried about with them. The disease appeared, disappeared, and reappeared. In the history of epidemics influenza took its origin in a region somewhere near the Russian border of Turkestan, spreading along the trade routes as rapidly as transportation moved. In the last epidemic in which the speed of travel had been greatest it spread East and West, to Spain and to China, and in 1919 over the entire globe. Small numbers of individuals were first affected, then larger numbers, then whole communities fell victims. A curve representing the speed of travel of poliomyelitis, compared with that of influenza, showed the progress of the former by weeks and months, of the latter by days and weeks. The curves were extremely similar, first a slow rise, then a steep rise, then a level maintained, then a steep fall or decline. The seeming mystery was, in fact, due to definite causes, like ordinary infections. Particular organisms, the presence of which might or might not cause the actual disease, gained access to the body, the persons carrying it possibly being immune, and yet transmitting it to others. Both these diseases had homes. Poliomyelitis had an endemic home in North-Western Europe. In 1881 it was recorded in Norway and Sweden, where an epidemic outburst preceded the general spread to other parts of the world in 1903–5. If the disease could be arrested in the influenzal stage we should have little to complain of, but we were confronted with the menace of a second disease, pneumonia, more severe, which became grafted on a widespread, relatively innocuous infection. However influenza germs entered the body, we knew that the pneumonia organism entered by the nose and throat and spread under circumstances rendering possible an inflammation of the lungs. Whatever we might think concerning influenza, there was no doubt that we should prevent that most serious complication. What were the proper measures of eradication of these great epidemic calamities? We had a splendid example of eradication of disease in yellow fever. We did not wait for the disease to become epidemic, it was destroyed in its endemic home. The endemic focus of influenza was somewhere on the eastern border of Russia. It was not too much for a reconstructive medical profession to conceive the cleaning up of such a region as that, which by its inaccessibility and its neglect had every 25 or 30 years originated waves of disease spreading over the globe. We might imagine communities intelligent enough to hold their officials responsible for control of disease, as nations have proven that they have held their rulers responsible for control in the war. Communities should be so taxed for public health that they would have the means and power to put into office those best qualified to carry out measures on a parallel with knowledge, holding them responsible, and, if they did their work ill, letting them suffer the consequences.

On the second evening of the Congress Dr. FRANK BILLINGS (Office of the Surgeon-General, Washington, D.C.) gave an address on the Physical and Mental Rehabilitation of Disabled Soldiers of the United States Army, with an exhibition of films illustrating physical reconstruction in the military hospitals.

MEDICAL MATTERS IN SPAIN.

(FROM OUR OWN CORRESPONDENTS.)

Patent Medicines in Spain.

IN the interests of public health and in response to numerous representations made by the medical and pharmaceutical professions of the country the Spanish Government has at last undertaken to regulate the traffic in proprietary medicines, and to this effect it has promulgated an Order dealing with the manufacture and sale of such preparations equally applicable to national as well as foreign products. It defines a pharmaceutical specialty as "every medicament of known composition, distinguished by the name of its originator or by a fancy appellation, put up in uniform packages and destined for sale in a pharmacy or elsewhere. Preparations the composition of which is partially or totally unknown, as well as those merely stating that they 'are prepared from,' are to be regarded as secret remedies, the sale of which is prohibited." Unless the preparation marketed as a proprietary is made in accordance with a formula contained in the Spanish or in a foreign pharmacopœia, in which case it must be labelled with the official title, and without any additional qualification, it must be registered with the general inspection of the board of health before it may be sold in Spain. Application for registration of a proprietary medicine must be accompanied by the package (in the case of foreign preparations three packages must be submitted), the designs or proofs of the label, wrapper, and prospectuses relating to the preparation, the exact composition, and the grounds which induce the manufacturer to place the product on the market in the form of a proprietary medicine. When registered the preparation may only be sold provided the label and all printed matter referring to it mention the name under which it has been registered, the name of the maker and his profession, where it is manufactured, its composition, the serial number, and date of its registration. Proprietary medicines may only be manufactured by pharmacists or in establishments where the director and the technical personnel are pharmacists. In the case of foreign specialties the professional qualification of the applicant must be certified by the competent health authority of the country of origin on the back of the application for registration.

Questions relating to the therapeutic or pharmacological action of a proprietary medicine submitted for registration will be referred to the Royal National Academy of Medicine for its decision. The health authorities are entrusted with the task of supervising the sale of such products and of enforcing the observance of these regulations. If it is found that the composition of a registered proprietary has been altered, and does not correspond with that entered on the register, its sale will be stopped and a renewed application for registration by the same manufacturer will be refused. The registration in each case is strictly personal, and on the death of the holder, or in the event of his ceding his interest in the preparation to another person, or if the manufacture is entrusted to another party, a fresh application for registration must be made by the new owner. Proprietary medicines which contain potent drugs, defined as all substances of which the maximum initial dose ranges from a fraction of a milligramme to 5 centigrammes, as well as those possessing a drastic, antipyretic, emetic or emmenagogue action, and, in preparations for external use, a caustic or irritant effect, may only be sold in a pharmacy. If the preparation consists solely of one or more drugs answering this description, it may only be supplied on production of a medical practitioner's prescription. The manufacture and public advertisement in any form of any remedies directly or indirectly destined to prevent conception, is forbidden, as well as any references to the possibility of such use. In the case of proprietary medicines at present on sale in Spain, whether national or foreign, a period of two years is allowed in which registration can be effected. All new preparations of this class, as well as the importation of specialties not at present on sale in Spain, must comply with these rules before their sale in Spain is permitted.

Marine Sanatorium for Children Suffering from Surgical Tuberculosis at Gorliz, Vizcaya.

Lately there was opened a magnificent public charity, which, it is hoped, will be a model of its kind for many

others in Spain. The writer first paid a visit to the place some six years ago, when the sanatorium was only in the early stage of construction. Founded by the Provincial Council of Vizcaya and aided by voluntary contributions, its progress to the present state of usefulness has been slow, but the result is highly satisfactory. For situation, plan, and internal arrangements it would be difficult to beat. The model is that of Berck-sur-Mer in France and also, as I was later informed, the Marine Sea Bathing Hospital, Margate. The sanatorium contains 300 beds and is on the Bay of Biscay some 15 miles from Bilbao, lying close to the sandy shore of a little bay, facing due west. It is surrounded by hills, which are only broken in their continuity by a gap which forms the bay. A more perfect arrangement for heliotherapy it would be difficult to plan. As a suntrap the aspect has been specially chosen. The wide verandahs in front and behind each ward are for morning and afternoon use respectively. The flat roof of the central block is also designed for open-air treatment. The sanatorium is a massive stone structure, cemented, and white in colour, with square blue tiles arranged in bands near the top, giving it a curious speckled appearance in Basque style. It consists of three floors with large wards identical in character, the walls and floors tiled, but with the angles duplicated, not rounded, the wider angles affording less lodgment for dust than the gutters of the usual kinds. In all the passages the gutter angle, however, prevails. Each ward contains space for 20 cots, with a cubic space of 50 metres for each. The cot is of white enamelled iron fitted with a movable lattice tray suspended by hooks for the purpose of raising or tilting the hair mattress upon it. A white-enamelled iron and glass locker is beside each cot. So far only 30 little patients are in the hospital, and these, when I last visited the place, were lying in their cots on one of the spacious verandahs outside the wards. They were basking in the afternoon sun on the western side practically in a state of nudity, many so sunburnt as to be peeling, for the doctors believe in the beneficial effects of the direct solar rays on skin tuberculosis and joint disease. Even dressings over open wounds were cast aside and pus welled up by the action of kicking legs. In front of the sanatorium the quiet ripple of the tide was creeping over the sand of a perfect bathing-place, where in suitable cases sea-bathing augments the cure. There is a complete installation for X rays adjoining the operating theatre, sterilising apparatus of up-to-date pattern, shoots for soiled linen, and many ingenious contrivances of a sanitary kind. The water-closets and baths are provided by an English firm, Twyfords. The large laundry in the basement is complete with the latest machinery. The whole building can be heated throughout by steam radiators. The kitchen is in a separate block at the back, and contains the most modern kind of boilers and cookers, worked by super-heated steam. There are buildings for the nursing staff, a chapel, and a special separate block called the "lazareto" for cases of doubtful tuberculosis for observation purposes. The cost of the whole sanatorium when complete will be upwards of £170,000.

SOUTH AFRICAN NOTES.

(FROM OUR OWN CORRESPONDENT.)

A Mild Recrudescence of Influenza.

THE Union Department of Public Health reports that after the epidemic of October and November last occasional sporadic cases and small localised prevalences have continued to occur throughout South Africa Up to the end of April last the reported cases averaged 166 and the deaths 10 per cent. of the cases. May ushered in cold weather and increased influenza cases and deaths. It will be seen from the following figures that there was a remarkably large increase in the number of cases—though happily not in deaths—during the last week in June and first week in July. This is the South African mid-winter, and it has been a singularly mild one. The figures have been for the weeks ending—

	Cases.	Deaths.		Cases.	Deaths.
May 17th	1025	... 60	June 14th	1701	... 134
,, 24th	691	... 56	,, 21st	1933	... 165
,, 31st	1363	... 116	,, 28th	4272	... 163
June 7th	1297	... 10	July 5th	5706	... 196

Many mild cases escaped notification. While some of the localised prevalences have been fairly severe the disease, generally speaking, has been of much milder type than during last year's epidemic, and with less tendency to pneumonia or other complications. The incidence has been more severe on those localities and classes of population which escaped comparatively lightly last year. Although second attacks are not uncommon, persons who escaped last year are now the principal sufferers. The incidence of the disease on children and elderly persons, formerly light, has now become heavier. At Pietermaritzburg, and in certain other districts, the schools have been closed. The disease has been particularly severe in the Heilbron district, Orange Free State, where there have been over 60 deaths. The severity is now abating, but recent cases have much sooner developed pneumonia than previous ones. It is reported that influenza in the Hekpoort Valley and along the Magaliesberg, Transvaal, is worse than it was last year. Whole households are down in some cases, and, unfortunately, without any doctor, nurse, or medicine being available. Dr. J. Anderson, medical officer of health, Capetown, reported on July 4th that the influenza position in the city is quite satisfactory. Capetown suffered exceptionally severely in last year's epidemic.

A Stricken Transport.

Epidemic influenza occurred on H.M.S. *Kursk*, which left Sydney, Australia, on May 4th, with a ship's complement of 213, military personnel 109, and 995 German internees. There were three doctors and three nurses on board. The vessel arrived at Durban on June 21st, and reported 635 cases of influenza during the voyage; deaths, 1 guard and 16 internees; 94 sick on arrival, 7 very seriously. The vessel was quarantined. All serious cases were landed and isolated in hospital, where two died. The vessel was thoroughly cleansed and disinfected, while the internees were kept on Salisbury Island and the Bluff; no further cases occurred, and the vessel sailed for Europe on June 28th.

Tribute to a Lady Doctor at Capetown.

Dr. Jane Waterston, a medical practitioner and ardent social worker at Capetown, was presented on Friday, July 4th, with an illuminated address, a letter case, and cheque, subscribed for by the citizens, as a small mark of their appreciation of Dr. Waterston's medical, social, and missionary labours during the last 50 years. Dr. Waterston became half a century ago a coadjutor of Dr. Stewart at Lovedale Native College, and, embracing the medical profession, was afterwards a missionary in Nyasaland, following in Livingstone's steps. For the last 30 years she has done a great social work at Capetown, especially for the Free Dispensary there. The Mayoress of Capetown (Mrs. W. J. Thorne) presided at the gathering, and said that the example of self-sacrifice and devotion to ideals of duty displayed by Dr. Waterston in South Africa would be an inspiration to all the women of the country. A letter was read from the Right Hon. John X. Merriman, M.L.A., the G.O.M. of South African Parliamentary life, which concluded:—

"May God bless Dr. Waterston, and may she still live many years to shed the light of her holy and unselfish life over the dark places of South Africa is the heartfelt wish of her admiring friend,
JOHN X. MERRIMAN."

Sir John Buchanan, in paying his tribute to Dr. Waterston, said that she had embraced the medical profession because of her enthusiasm for the succour of humanity, and he had been credibly informed that she had actually walked hundreds of miles on foot in the interior of Africa, all in the cause that she had at heart. Dr. Waterston, in acknowledging the testimonial, said that it was the most trying time of her life. She intimated that she did not propose to leave off public work.

Dr. Alex. Ogg has accepted appointment to the chair of Physics in the University of Capetown.

BELFAST LOCAL GOVERNMENT BOARD MEDICAL INSPECTOR.—Dr. John McCloy has been appointed by the Local Government Board their medical inspector in charge of the Belfast district, in place of Mr. E. F. Stephenson, transferred to another area. This appointment will greatly strengthen the Local Government Board, as Dr. McCloy has a thorough knowledge of modern pathology and bacteriology, and was up to the date of his present appointment senior assistant in the work of the tuberculosis scheme in Belfast.

NOTES FROM INDIA.

(FROM A REGULAR CORRESPONDENT.)

Burma Pasteur Institute.

AT the Burma Pasteur Institute during 1918-19 595 persons sought advice as compared with 426 in the previous year. The number of persons bitten by animals of proved taint who submitted to the full course of treatment fell from 183 in the previous year to 105 in the year under review. There were no deaths during the year from hydrophobia amongst those who submitted to treatment, whilst at least four deaths from this cause are reported to have occurred amongst 34 individuals who declined to undergo treatment.

Influenza Recrudescence.

The following communique has been issued by the Government of India:—

Outbreaks of influenza are reported from Bombay, Calcutta, Rangoon, and Madras. These outbreaks do not (save in the case of Bombay) appear to have attained serious dimensions. Nevertheless, they coincide in time with the preliminary outbreaks of last year, and though there is at present no reason to apprehend an epidemic of the same proportions the measure of immunity conferred on any individual by a previous attack is uncertain. Accordingly the following steps have, among others, been taken as a preliminary precaution.

The Government of India have suggested to Maritime Governments the taking of power to notify by rule under the Indian Ports Act ship-borne cases of pneumonia, and discretionary power similarly to deal with ship-borne cases of violent influenza. They have requested early intimation of all outbreaks in order that timely warning may be given to the authorities in neighbouring areas and to the public.

Stocks of anti-influenza vaccine are being made ready for early transfer to centres of infection. Surgeons and administrative medical officers are being invited to indent for supplies to be ready on the spot in case of emergency.

A specialist has been deputed to Bombay to deal with the situation.

The Sanitary Commissioner with the Government of India has distributed widely a leaflet dealing with influenza and the course that should be taken in case of an outbreak. This has been communicated to the press. He has specially recommended the use of an aniline nasal douche as an effective prophylactic.

Though there is no immediate cause for alarm, it has been thought advisable to inform the public of these new outbreaks in order that the necessary precautions may be taken and, should the disease show signs of further extension, other communiques will from time to time be issued.

Extra medical precautions have been taken at Howrah station to meet returning pilgrims from Puri. It has been ascertained that influenza is raging in epidemic form at Puri. At Howrah doctors treated 40 cases of influenza and 1 case of cholera.

Infant Welfare Exhibition at Delhi.

A maternity and infant welfare exhibition will be held in Delhi in February, 1920. It will be reserved for women on certain days, but will be open to men at other times. The proper care of mothers and babies will be shown by means of model exhibits, leaflets, lectures, pictures, magic-lantern slides, &c. The exhibition will be arranged in the following sections: pre-maternity, maternity, infant welfare, childhood, domestic hygiene, and sanitation, first aid and home nursing. A baby show will also be held. The whole will be under the patronage of Lady Chelmsford. It is hoped that this exhibition may be the forerunner of many others both in Delhi and in other cities of India, and that it may lead to a great improvement in the condition of childbirth and the welfare of young children.

Shortage of Medical Officers.

A leading Indian journal says:—

We understand that the Government of India are drawing the attention of the Secretary of State to the extremely serious shortage of regular officers of the Indian Medical Service and urging recruitment of a large number of European officers for enrolment permanently. The Government of India have also proposed that certain measures recommended by the Medical Services Committee as likely to increase the attractions of the I.M.S. should be announced in England at once. We further understand that the increased rates of pay for the I.M.S. in civil employment will be announced very shortly, and that these rates will take effect from Dec. 1st, 1918.[1] This action of Government will help to allay the apprehension created by the grave state of affairs to which we have repeatedly directed attention, and it will also no doubt afford some encouragement to overworked officers of the I.M.S. who are almost at breaking point. There is no disguising the fact that the present position is well nigh desperate. More than 60 per cent. of the I.M.S. civil officers are still in military employ, and military employments in India are increasing, not diminishing. India itself has been ransacked for doctors to make good the deficiency and the only hope now lies in making the terms of service so attractive that the necessary number of men will be forthcoming from the medical schools at home. We are glad to learn that the Government of India recognise that the matter is one of extreme urgency and are apparently determined to put it right. But it will not be so easy as it would have been before the war to obtain recruits by improving the conditions of the Service. There probably never was a time, indeed, when the opportunities open to medical men at home were so favourable as they are at present. This is an additional reason why there should not be a moment's unnecessary delay in taking the definite action which the gravity of the situation demands.

War Gratuity of the Indian Army.

Issuable on the British scale, the Government of India announces that it has been decided to issue to regular officers in the Indian Army, Indian Medical Service, and of the British garrison in India, and to departmental officers with honorary rank of the Indian Unattached List a gratuity for war service on the same conditions generally of those announced for officers of the British Army in Army Orders IV., dated June 7th, 1919. The gratuity will be payable in the case of officers still on the active list on August 4th, 1919, or the termination of war as defined by statutory authority, whichever is earlier. It is not payable to any officer commissioned after February, 1919. Officers who have retired and the legal representatives of officers who have died or been killed in the war should apply for a form of claim to the Secretary, Military Department, India Office, London, S.W. 1.

New Medical Scholarship.

Lieutenant-Colonel W. D. Smith, commandant of the Madras Guards, has presented a scholarship valued at Rs.1200 to the Madras Medical College for students in chemistry and drugs.

Calcutta University Commission

A summary of the report of the Commission has been published. It concludes as follows:—

We desire to make it clear that certain reforms in the University of Calcutta ought not to be postponed whatever scheme be adopted—namely, the provision of further residential accommodation, the provision of a teachers' training department, the provision of additional accommodation for teaching, and the provision of measures for supervising and improving the health of the students.

August 10th.

CONTROL OF VENEREAL DISEASES.

Early Preventive Treatment and the N.C.C.V.D.

A RECENT deputation from the National Council for Combating Venereal Diseases, led by Sir Malcolm Morris, was received by the Public Health Committee of the London County Council. Its object was to urge the County Council to make provision, through its scheme for the diagnosis and treatment of venereal diseases in London, for early preventive treatment—that is to say, "treatment at an approved centre within a short time after exposure to possible infection." The question also arose of treatment before exposure, and of the alleged objections to such treatment on the side of public morals. It was stated by the deputation that for early treatment to be effectual in the prevention of syphilis, it must be initiated within six hours after exposure to risk. It therefore follows that it would be necessary to institute a very large number of early treatment centres, accessible at all hours of the night and day. The Public Health Committee stated that with one exception the committees of all the London hospitals at which venereal clinics were in operation had definitely expressed the opinion that it would

[1] The new rates of pay for the military and civilian sides of the Indian Medical Service were given in the Students' Number of THE LANCET, August 30th, 1919, p. 393.

be impossible for them to introduce early preventive treatment on these lines. The National Council has made inquiry of medical officers of health of certain provincial towns, but apparently no steps have been taken to provide opportunities for such treatment. The Public Health Committee came to the considered conclusion that quite apart from the moral issues involved, although benefit might accrue in individual cases, yet this would be nullified by the resultant increase in the number of cases exposed to infection. The Committee therefore recommended:—

"That in connexion with its scheme for the diagnosis and treatment of venereal diseases the Council is not satisfied that the public provision of early preventive treatment as suggested by the National Council for Combating Venereal Disease is desirable, and that the National Council be informed accordingly."

We would ask our readers to consider what the result will be if this policy of passivity be persevered in.

1. If we regard the question in its bearings upon public health we shall find that a far larger number of patients would ultimately require treatment for these diseases at a stage when it will be much harder and take more time to effect a cure, whilst in some instances it will be impossible for them to recover. Many sufferers before they recognise themselves as such will have communicated the infection to others. Some of these will be visitors to the large towns, who on returning to their country homes will find it difficult to secure adequate treatment for themselves or their conjugal victims. Whilst we are endeavouring to secure treatment for venereally-infected pregnant women and attempting to treat infants suffering from congenital syphilis and gonorrhœal ophthalmia, we shall be neglecting the obvious course of trying to eliminate the factors responsible for the production of such lamentable results—in other words, we shall be providing wilfully a constantly increasing and preventable stream of maternal and infantile infection.

2. The community will achieve economy if those responsible for its welfare will adopt early preventive treatment. If they do not institute such centres then vastly increased sums will eventually be expended upon institutions at which an increasingly large number of patients suffering from the fully developed disorders will have to be treated. Further, great sums will be called for to maintain the army of parasyphilitic patients in asylums, infirmaries, &c. More medical men will be required for the efficient working of curative clinics as apart from preventive ones; this will entail an augmented salary list and deflection of medical energy from other spheres. The loss to the nation in productive working power through patients incapacitated will be as immense as it will be unnecessary.

Doubtless the National Council for Combating Venereal Diseases will not allow the position to remain as it is, and we ask our readers to augment their efforts.

Hostels for Gonorrhœal Patients.

Medical officers in charge of venereal clinics are now faced with a variety of problems. A very difficult one is represented by the question as to what to do with patients suffering from gonococcal epididymitis who are unable to carry out the required treatment. Take the case of a man living in a single room, without attendance, unable to obtain a supply of hot water, and so on; he is terribly handicapped, both as regards relief from suffering and ultimate recovery. His treatment entails more work and a greater demand on the resources of the venereal clinics. There is also in these cases a prolongation of the period of infectivity and a greater prospect of sterility ensuing. The general hospitals to which clinics are attached can hardly be expected to give up beds for this purpose; but what objection can be advanced to the institution of hostels to which clinics can send those cases which cannot be treated adequately in their own homes? The dictates of humanity, of national health, and of economy (financial and temporal) demand such a step, which we commend to the Ministry of Health. Once the practical necessity is admitted, the question of sites, staff, and salaries is capable of ready solution.

Travelling Consultants for Venereal Clinics.

Owing to the rapidity with which venereal clinics are now being formed, it follows of necessity that many of the medical officers in charge of them are practitioners who have as yet had but small opportunity of gaining experience in such work. Cases will be brought before them which call for an opinion, to be acquired only by a large and long experience. We are assured that medical officers who are possessed by the desire to do the best for their patients and to acquire knowledge for themselves would welcome an expert opinion. Might not the Ministry of Health select a certain number of experts from different parts of the country who would be willing when called upon to visit clinics on the request of the medical officer in charge? Such experts would naturally work under the ægis of the advisor or advisors to the Ministry who have been, or may be, appointed. Since these consultants would only visit a clinic on the invitation of its medical officer, any objection to such a scheme on the score of interference or compulsion would be nullified.

Systematic Care in the Sexual Diseases.

In an article with this title[1] Dr. James Bayard Clark, U.S.M.C., gives a practical account of the organisation, equipment, and treatment routine at the Genito-Urinary Clinique at Camp Logan. Medical officers in charge of venereal treatment centres and those about to assume such command should study this graphic description with care. Hospitals, municipal boards, and other bodies constructively inclined might gain by assimilating the hints contained therein before beginning to build. The description of the department devoted to early or prophylactic treatment possesses a particular topical interest in view of the present tendency to initiate such "early treatment centres" throughout this country in the interests of civilian health.

TUBERCULOSIS.

Residential Treatment for Discharged Sailors and Soldiers: Report of the Inter-Departmental Committee.

THE Committee appointed last April by the Minister of Health and the Minister of Pensions "to consider and report upon the immediate practical steps which should be taken for the provision of residential treatment for discharged soldiers and sailors suffering from tuberculosis and for their reintroduction into employment, especially on the land," has issued its report (Cmd. 317, price 6*d*.). It is calculated that about 35,000 ex-Service men are suffering from tuberculosis traceable to, or aggravated by, the conditions of service. Of these, about 22,000 have received, or are receiving, residential treatment. Though it is conceded that the priority of treatment hitherto afforded the ex-Service man should continue, it is pointed out that the problem of the tuberculous ex-Service man is only one aspect of a national scourge. The present accommodation for institutional treatment is inadequate, for the number of beds for tuberculosis in the United Kingdom amounts only to 19,500, while only 10,000 to 11,000 of these are available for adult men. The report recommends an immediate and considerable increase of accommodation, as well as the most effective use of existing means of treatment. Generally speaking, Army hutments are unsuited for the treatment of tuberculosis, though the best of them, if used in their present position, may prove, at any rate, of temporary use. It is suggested that local authorities ought to secure these huts, without charge, from the Government.

Of the many schemes submitted to it the Committee find the colony system the best. This would provide (1) sanatorium treatment, (2) training, (3) permanent village settlement with employment under medical supervision, the three sections being intimately correlated in the same area. It is suggested that the Government should at once make provision in the Estimates for £1,000,000 for the finance of village settlements, primarily for ex-Service men. These settlements might be provided by local authorities or voluntary bodies. In the former case the capital sum should be provided by the Government. After, say, five years, the local authorities might contribute to the cost by paying not less than one-fifth of the capital expenditure. The Committee insist on the superiority of sanatorium over home treatment for advanced cases, and urge local authorities and large employers of labour to provide special facilities for employment of those ex-Service men for whom the village settlement is not a satisfactory solution of their difficulties.

[1] Journal of the American Medical Association, April 26th, 1919.

Paris: Post-Graduate Courses in Tuberculosis.

Three post-graduate courses in tuberculosis will be given in Paris during the coming academic year under the direction of MM. Bernard, Bezançon, Calmette, Kuss, Letulle, Rist, Sergent, and Teissier. The courses will be of six weeks' duration, commencing on Oct. 20th, 1919, and April 15th and June 15th, 1920. They will be essentially practical in nature, and will include pathology, bacteriology, physical diagnosis, X ray, laryngology, social welfare and dispensary administration. Opportunity will be afforded to the students to work each morning in a dispensary or hospital under the guidance of the lecturing physicians. The course will be open to graduates in medicine who are citizens of France or of allied and neutral countries. The Commission for the Prevention of Tuberculosis in France will grant subventions to a limited number of French physicians. Further details of the course may be obtained from Dr. E. Rist, 5 rue de Magdebourg, Paris.

Tuberculosis in Norway and Sweden.

Norway's expenditure on tuberculosis.—Since the adoption of the tuberculosis law of 1900 Norway has contributed increasingly large sums to the campaign against this disease. In 1901 the State's budget for tuberculosis was Kr.80.000. By 1908 it had risen to about Kr.250 000; by 1914 to Kr.450,000; by 1916 to Kr.900,000; by 1917 to Kr.1,300,000; and by 1918 to Kr.1,800,000. For the year 1919–1920 the State has budgetted for about Kr.3,225,000. It will thus be seen that since 1901 the funds officially provided for tuberculosis have been multiplied by about 40. This enormous rise is partly connected with the general rise of prices, but the chief factor is the State's recognition of the necessity for constantly undertaking new campaigns against the disease. It realises that the money thus spent is a sound financial investment, directly and indirectly. At present it is estimated that Norway loses every year from tuberculosis the equivalent of about 50 million kroner in working capacity, quite apart from the incalculable distress which the disease brings to thousands of homes.

The Norwegian National Association against Tuberculosis.—The following figures are illuminating as showing what large sums a country, with a population of only a little over two million, can collect by private initiative for the campaign against tuberculosis. The balance-sheet of this association for 1918 shows a total figure of Kr.76.617. The income for the year was Kr.66,520, and of the sums expended Kr.11,786 were devoted to salaries and office expenses, Kr.16,834 to educational propaganda, Kr.12,591 to the education and pay of nurses, and Kr.31,741 to miscellaneous expenses. Included under this heading was expenditure on new houses built to replace old infected houses.

The Swedish National Association against Tuberculosis.—This association, which recently celebrated its fifteenth anniversary, owes its inception and organisation in large measure to Sweden's chief administrative medical officer, Dr. B. Buhre. The main feature of the association's programme is a vigorous and organised scheme of prevention. Special attention is devoted to the dispensary system, which provides for the supervision of all tuberculous homes and takes every possible measure to prevent spread of the disease to the healthy from the infected in these homes. The association, which has a membership of 17,000, has trained 165 nurses for this dispensary work, and it has provided three homes for healthy children taken from tuberculous surroundings. In various ways the association has taken steps to prevent the infection of 1200 children in their homes. The income of the association is entirely derived from private, independent sources, and by the sale of its various badges about Kr.1 550,000 have been obtained since 1904. In 1918 alone they brought in Kr.181,000. In 1917, in gifts and legacies alone, Kr.236,630 were received, and interest on capital amounted to Kr.54.980. The total income in 1917 was Kr.508.619.

Mother of the "May Flower."—On Feb. 11th last Fru Beda Hallberg celebrated the fiftieth anniversary of her birthday, which was the occasion of many greetings sent her from the various countries that have adopted her idea. Since she started the "May Flower" in 1907 this scheme for collecting funds for the tuberculosis campaign has brought in over 2,000 000 kroner in Sweden alone. It was soon adopted in Norway, where about Kr.900,000 have been contributed. The scheme was introduced in America by Fru Hallberg's sister, who founded the association "Linnéan" on the 200th anniversary of the Swedish naturalist's birthday. Finland adopted the scheme in 1908, Denmark in 1909. In 1910 Germany adopted it in the form of "Die Blume der Barmherzigkeit," large sums being contributed. Austria and Russia followed in 1911. Since then Holland, Belgium, France, Italy, and England have followed suit.

Tuberculosis in Germany.

A week after peace was signed two Americans, Miss Jane Addams and Dr. Hamilton, made a tour of inspection in Germany, and according to the report they have issued tuberculosis has not only become far more prevalent than before the war, but it has also in many cases assumed rapidly progressive and malignant forms, previously regarded as rare curiosities. Professor Kayserling stated that the effect of partial starvation in promoting tuberculosis was so striking that German physicians have begun to regard it primarily as a disease of nutrition, to be controlled much more by appropriate feeding than by the prevention of infection. At present he sees as many cases of tuberculosis in children every month as he used to see in the year. In the course of a visit to Professor Czerny's wards at the Charité, the Americans were informed that fully half of all the children there were tuberculous, and they were shown many hitherto rare cases, such as tuberculosis of the bones of the head, including the upper jaw. At the City Orphanage in Berlin, where v. Pirquet's test used to be positive only in 10 per cent., it had become positive in 30 per cent. But while infection has increased threefold, actual illness has increased fivefold, as shown by the number of cases of skin, gland, bone, and pulmonary tuberculosis. In Halle there is ten times as much skin tuberculosis as there was before the war. All these effects of starvation cannot be gauged simply by estimates of the death-rate; most of the children infected with tuberculosis will not die at once or even show signs of the disease for some time. But, it is estimated, for the next 20 years the tuberculous morbidity will be much higher in Germany than it has been for many decades. One of the agencies through which relief work is being done is "Save the Children Fund," 329, High Holborn, W.C. 1.

URBAN VITAL STATISTICS.

(Week ended August 30th, 1919.)

English and Welsh Towns.—In the 96 English and Welsh towns, with an aggregate civil population estimated at 16,500,000 persons, the annual rate of mortality, which had been 9·7, 10·0, and 10·0 in the three preceding weeks, was again 10·0 per 1000. In London, with a population slightly exceeding 4,000,000 persons, the annual rate was 9·6, and was 0·8 per 1000 below that in the preceding week, while among the remaining towns the rates ranged from 1·9 in Wimbledon, 2·9 in Oxford, 4·0 in Cambridge, and 4 4 in Hornsey and in Lincoln, to 17·1 in Bournemouth, 18·5 in Wakefield, 19·6 in Barnsley, and 22 2 in Exeter. The principal epidemic diseases caused 317 deaths, which corresponded to a rate of 1·0 per 1000, and included 231 from infantile diarrhœa, 32 from measles, 29 from diphtheria, 14 from whooping-cough, 6 from enteric fever, and 5 from scarlet fever. Measles caused a death-rate of 3·5 in Gateshead. There were 1421 cases of scarlet fever and 1004 of diphtheria under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, against 1464 and 1063 respectively at the end of the previous week. The causes of 21 deaths in the 96 towns were uncertified, of which 7 were registered in Birmingham and 2 in Rotherham.

Scotch Towns.—In the 16 largest Scotch towns, with an aggregate population estimated at nearly 2,500,000 persons, the annual rate of mortality, which had been 10·0, 9 9, and 10·7 in the three preceding weeks, further rose to 10·9 per 1000. The 246 deaths in Glasgow corresponded to an annual rate of 11·5 per 1000, and included 25 from infantile diarrhœa, 3 from whooping-cough, 2 from diphtheria, and 1 each from measles and scarlet fever. The 73 deaths in Edinburgh were equal to a rate of 11·3 per 1000, and included 2 each from measles and scarlet fever, and 1 each from whooping-cough and infantile diarrhœa.

Irish Towns.—The 142 deaths in Dublin corresponded to an annual rate of 18·3 per 1000, and included 37 from infantile diarrhœa, 2 from scarlet fever, and 1 from diphtheria. The 131 deaths in Belfast were equal to a rate of 17·0 per 1000, and included 30 from infantile diarrhœa and 3 from scarlet fever.

WAR EMERGENCY FUND OF THE ROYAL MEDICAL BENEVOLENT FUND.—At the last meeting of the Committee of this Fund, Sir Alfred Pearce Gould, K.C.V.O., in the chair, applications for assistance were received and grants amounting to £1250 were made to seven applicants. The Committee are prepared to receive applications for assistance from demobilised officers of the R.A.M.C.(T.) and Special Reserve. All communications should be addressed to the honorary secretary, 11, Chandos-street, Cavendish-square, W.1.

The Services.

INDIAN MEDICAL SERVICE.

THE Secretary of State for India announces that 204 medical men are urgently required to fill vacancies in the Indian Medical Service. Of these two-thirds (136) will be Europeans and the remainder Indians. The appointment of European candidates will be made by nomination on the recommendation of a Selection Committee in England. Applications from Europeans and from Indian candidates resident in this country will be received at the India Office. Applications from all Indian candidates will be considered together. Appointment will be by nomination on the recommendation of a Selection Committee. Candidates must be over 21 and under 32 years of age at date of application. Preference will be given to candidates who are or have been serving with His Majesty's Forces during the war. All service rendered as a medical or combatant officer, or in a position usually filled by an officer, during the war will count both for promotion and pension on appointment to the Service, but not for the gratuity mentioned below. The scale of pay has recently been greatly increased. A Lieutenant on appointment now receives Rs. 550 a month (equivalent at the present rate of exchange, the continuance of which cannot be guaranteed, to £605 per annum). Those who have had three years or more previous service will enter in the rank of Captain on Rs. 700 a month (or £770 a year). An officer who is appointed to the Service in 1919 or 1920 may claim to retire on a gratuity of £1200 on completion of eight years' service from date of permanent appointment, provided he has given notice of his intention to retire 18 months before the date of retirement. An officer so retiring will also be eligible for a free return passage to Europe, if claimed within three months of retirement. Application forms and any further particulars desired can be obtained from the Secretary, Military Department, India Office. The correspondence should be clearly marked on the top left-hand side of the envelope "Medical Recruitment."

The scales of pay accompanying the announcement were published in the Students' Number of THE LANCET last week.

ROYAL NAVAL MEDICAL SERVICE.

Surg. Lieut.-Cmdr. C. F. Willes is placed on the retired list.

Temporary Surgeon Lieutenants transferred to the permanent list of Surgeon Lieutenants:—F. H. Vey, H. L. Pridham.

ARMY MEDICAL SERVICE.

Major-Gen. (temp. Lieut.-Gen.) Sir C. H. Burtchaell, K.C.B., C.M.G., relinquishes his temporary rank on re-posting.

Cols. S. F. Clark and W. L. Gray, C.M.G., retire on retired pay.

Col. E. M. Hassard is placed on the half-pay list under the provisions of Article 351, Royal Warrant for Pay and Promotion.

ROYAL ARMY MEDICAL CORPS.

The undermentioned Lieutenant-Colonels relinquish the temporary rank of Colonel on re-posting: H. B. Fawcus, T. C. MacKenzie.

Lieut.-Col. G. B. W. Brazier-Creagh (retired pay) is granted the rank of Colonel on ceasing to be re-employed.

Lieut.-Col. M. Boyle is placed on retired pay.

The undermentioned relinquish their temporary commissions on re-posting: Temp. Col. M. G. Foster, (R.A.M.C., T.F.), Temp. Lieut.-Col. Sir T. C. English (Hon. Colonel in the Army, R.A.M.C., T.F.), Acting Lieut.-Col. D. C. L. Fitzwilliams (Captain, R.A.M.C., T.F.), Temp. Major F. A. Hepworth (Captain, R.A.M.C., T.F.).

The undermentioned relinquish the acting rank of Lieutenant-Colonel: Major E. B. Booth, on ceasing to be specially employed; Major F. L. Bradish and Capt. W. W. MacNaught, on ceasing to command a Medical Unit.

The undermentioned relinquish the acting rank of Lieutenant-Colonel on re-posting: Major and Brevet Lieut.-Col. R. B. Ainsworth; Majors G. de la Cour, R. J. C. Thompson, C. R. M. Morris, E. M. Middleton, C. Scaife, E. C. Phelan, W. J. Weston, W. E. C. Lunn, N. Low, W. J. E. Bell; Temp. Majors T. M. Carter, H. M. Chasseud; Capts. M. White, R. M. Davies.

Major M. P. Leahy retires, receiving a gratuity.

To be acting Lieutenant-Colonels: Major M. C. Beatty, whilst commanding a Medical Unit; Temp Capt. (acting Major) R. Jamison; Temp. Capt. and Brevet Major (acting Major) W. E. P. Phillips, whilst specially employed.

The undermentioned temporary Captains relinquish the acting rank of Major: S. Brown, A. W. G. Woodforde, A. C. Profeit, P. L. Watkin-Williams, H. E. Rawlence, C. G. Skinner, A. F. Wright, G. Marshall.

Capts. A. L. Krogh and A. S. Crane relinquish the acting rank of Major on re-posting.

The undermentioned to be acting Majors: Capt. A. L. Krogh. Whilst specially employed: Capt. N. T. Whitehead; Temp. Capts. A. Fletcher, J. A. Mackenzie, A. F. Wright, R. G. Oram, N. L. M. Reader, V. C. Vesselovsky.

To be Captains: Capts. W. O. Tobias, D. S. Martin, and J. J. Molyneaux, from the Special Reserve; Temp. Capt. G. O. F. Alley.

To be temporary Captains: S. McNair and W. Fletcher-Barrett, late temporary Captains; R. J. Monahan; Temp Lieut. F. M. Simmonds.

Officers relinquishing their commissions: Temporary Lieutenant-Colonels retaining the rank of Lieutenant-Colonel: H. A. Kidd, D. G. Thomson, Temp. Maj. W. E. M. Corbett; Temporary Majors retaining the rank of Major: F. W. Broderick, H. W. Wiltshire, F. H. Welsh; Temporary Captains granted the rank of Major: F. F. Middleweek, R. W. Sutherland, G. E. Nelegan, H. E. Rawlence, J. D. Gimlett, W. H. Allen, E. W. Willett, P. W. Hampton, P. A. Leighton, C. S. Gideon, J. F. McLay, O. J. Day, H. Cordner; Temp. Capt. and Bt. Major Fell retains the rank of Brevet Major. Temporary Captains retaining the rank of Captain: W. T. Buchan, J. B. Mackay, A. G. B. Duncan, G. A. Upcott-Gill, R. P. Garrow, G. M. Vevers, G. P. Armstrong, L. T. Giles, R. C. L. Batchelor, C. C. Irvine, T. D. Cumberland, P. Lornie, D. M. Moffat, A. R. Goldie, R. W. E. Roe, C. H. Lloyd, G. G. Buchanan, A. S. Richmond, J. S. Kinross, E. H. Edward, G. Stanger, J. H. C. Egan, H. P. Dawson, H. H. Mofatt, H. Quigley, R. Puttock, C. K. Cohen, A. W. Mitchell, R. J. M. Love, J. W. Flood, B. Haigh, J. Cruickshank, W. G. Southey, S. A. Montgomery, V. C. Pennell, H. E. Griffiths, J. J. Healy, R. L. Barwick, W. M. Stewart, L. T. Wells, J. M. Ross, J. H. Wilson, P. D. Hunter, I. W. Corkey, H. M. Cade, A. M. A. James, H. F. Hutchinson, F. M. Simmonds, L. Makin, S. Jacob, F. P. Grove, H. G. Carlisle, C. H. Newton, A. N. Drury, H. M. C. Green, J. S. Young, M. L. Neylon, S. G. Trail, A. B. R. Sworn, E. Coleman, J. W. Power, L. M. Markham, P. M. Shiels, T. W. Sheldon, G. H. H. Russell, A. P. MacMahon, W. T. Smith, M. T. W. Steedman, G. K. Thompson, W. Miller, G. O'N. Waddington, W. Brown, G. T. Cregan, G. W. Elder, H. M. Roberts, (acting Major) G. W. S. Paterson, H. N. Eccles, F. B. Chavasse; Temp. Hon. Capt. W. S. Rutherford (retains the honorary rank of Captain); Temp. Lieut. J. G. Thomson. Temporary Lieutenants retaining the rank of Lieutenant: F. C. Mann, F. W. P. Sullivan, T. S. Macaulay, H. E. Davison, M. Baranov, S. A. Bontor, S. Bardal, F. H. Boone.

Canadian Army Medical Corps.

Temporary Majors to be temporary Lieutenant-Colonels: (Acting Col.) C. F. Martin, (Acting Lieut.-Col.) M. H. Allen.

Temp. Capt. E. F. Risdon to be acting Major while employed as Officer in charge of Canadian Section of Plastic and Facial Surgery.

The undermentioned temporary Captains retire in the British Isles: R. Wershof, J. P. Bonfield, A. E. Wood, H. C. Clermont, H. L. Walker, F. A. O'Reilly, J. A. Houston, R. G. Moffat.

Temp. Capt. J. P. S. Cathcart to be temporary Major.

SPECIAL RESERVE OF OFFICERS.

The undermentioned Captains relinquish the acting rank of Lieutenant-Colonel on re-posting: J. R. R. Trist, C. N. Gover, T. Y. Barkley, S. Miller.

Capts. C. Armstrong and R. O. C. Thomson to be acting Majors whilst specially employed.

The undermentioned relinquish the acting rank of Major: Capts. H. W. H. Holmes, J. Gossip; Lieut. R. J. Patchett.

Lieut. J. Whittingdale relinquishes his commission on account of ill-health and retains the rank of Lieutenant.

TERRITORIAL FORCE.

Lieut.-Col. (acting Col.) T. F. Dewar relinquishes the acting rank of Colonel on vacating the appointment of Assistant Director of Medical Services.

Majors (acting Lieut.-Cols.) relinquishing the acting rank of Lieutenant-Colonel on ceasing to be specially employed: T. P. Puddicombe, J. W. Mackenzie.

Capt. (acting Lieut.-Col.) J. Strathern relinquishes the acting rank of Lieutenant-Colonel on ceasing to be specially employed.

Capts. (acting Majors) relinquishing the acting rank of Major on ceasing to be specially employed: J. C. Grieve, G. W. C. Hollist, C. H. Crawshaw, W. W. Greer, J. H. Robinson.

Capt. (Bt. Major) (acting Major) W. Brander relinquishes the acting rank of Major on ceasing to be specially employed.

Capt. B. J. Alcock to be acting Major whilst specially employed.

Capt. D. E. S. Davies relinquishes his commission on account of ill-health contracted on active service, and retains the rank of Captain.

Capt. H. W. Spaight to be Deputy Assistant Director of Medical Services, and to be acting Major whilst so employed.

1st London Sanitary Company: Capt. W. N. W. Kennedy relinquishes his commission on account of ill-health contracted on active service, and is granted the rank of Major. Lieut. P. R. Fincher to be Captain.

Sanitary Service: Capt. (Bt. Major) (acting Major) C. M. Fegen relinquishes the acting rank of Major.

4th Scottish General Hospital: Capt. (acting Major) W. A. Campbell relinquishes the acting rank of Major on ceasing to be specially employed. Capt. W. A. Campbell is restored to the establishment.

ROYAL AIR FORCE.

Medical Branch.—Lieut.-Col. E. O. B. Carbery (Surg.-Cmdr., R.N.) relinquishes his commission on ceasing to be employed.

C. P. V. MacCormack, J. G. Skeet (late Captain A.I.F.), G. M. Mellor are granted temporary commissions as Captains.

Lieut. C. Duggan to be acting Captain whilst employed as Captain, without pay and allowances of that rank.

G. H. H. Maxwell and T. H. K. MacLaughlin are granted temporary commissions as Lieutenants.

The undermentioned are transferred to Unemployed List: Capts. J. W. Brash, G. Sparrow, N. C. Graham, G. Visger, R. H. Robbins, Lieut. N. C. Cooper.

Dental Branch.—W. P. Bole is granted a temporary commission as Lieutenant.

INDIA AND THE INDIAN MEDICAL SERVICE.

Lieut.-Col. C. Duer, I.M.S., has resigned the Service. Major-Gen. P. Hehir, I.M.S., is retained in the Service until further orders. Lieut.-Col. E. F. G. Tucker, I.M.S., to be Senior Medical Officer, J. J. Hospital, vice Lieut.-Col. A. Street proceeded on leave. Major A. F. Hamilton, I.M.S., to act as Senior Surgeon, J. J. Hospital, and Professor of Surgery, Grant Medical College, Bombay. Lieut.-Col. R. M. Carter, I.M.S., to be Dean, Grant Medical College, Bombay. Dr. Anandrai Keshaolal to act as Senior Surgeon J. J. Hospital, and Professor of Surgery, Grant Medical College, Bombay, in relief of Major Hamilton, I.M.S. Dr. Gopal V. Deshmukh to act as Second Surgeon, J. J. Hospital, and Professor of Clinical and Operative Surgery, Grant Medical College, Bombay, vice Dr. A. K. Datal. Lieut.-Col.

S. H. Burnett, I.M.S., to act as Surgeon Superintendent, St. George's Hospital, Bombay, vice Lieut.-Col. T. Jackson proceeded on leave. Major W. M. Houston, I.M.S., to act as Presidency Surgeon, First District. Major A. D. Stewart, I.M.S., to act as Surgeon-in-Charge Gokeeldas Tejpal Native General Hospital, Bombay. Major R. H. Bott, I.M.S., has been recalled from military duty in Simla and has taken over from Sir James Roberts the Civil Surgeon of Simla, West. Sir James Roberts is at present acting as Surgeon to the Viceroy as Lieut.-Col. Austen Smith is ill. The services of Lieut.-Col. D. W. Sutherland, I.M.S., Principal, King Edward Medical College, Lahore, were placed at the disposal of the Government of India Department from May 26th. Lieut.-Col. J. N. Walker, I.M.S., on return from leave to be Civil Surgeon, Lucknow, vice Lieut.-Col. Birdwood, I.M.S., granted leave. Lieut.-Col. G. T. Birdwood, I.M.S., Civil Surgeon, second class, has been appointed a Civil Surgeon, first class, vice Lieut.-Col. J. M. Crawford, I.M.S. Major C. H. L. Palk, I.M.S., resigns the Service.

Major-General W. H. B. Robinson, C.B., I.M.S., is appointed an Honorary Surgeon to the King, vice Col. Hormasjie Edaljie Banatvala, C.S.I., I.M.S., and Major-General W. E. Jennings, I.M.S., is appointed an Honorary Physician to the King, vice Major-General R. W. S. Lyons, I.M.S.

THE HONOURS LIST.

The following awards to naval medical officers are announced :—

C.M.G.

Surg.-Cmdr. J. F. HALL.—For valuable services in H.M.A.S. *Australia* and H.M. Hospital Ship *Soudan*, and at the Medical Department, Admiralty.

Surg.-Cmdr. T. T. JEANS.—For valuable services in various theatres of the war.

Surg.-Cmdr. F. BOLSTER.—For valuable services in various theatres of the war.

C.B.E. (Military Division).

Surg.-Capt. C. S. WOODWRIGHT.—For valuable services at the R.N. Sick Quarters, Yokohama, in H.M. Hospital Ship *Soudan*, and as Principal Medical Transport Officer.

O.B.E. (Military Division).

Surg.-Lt.-Cmdr. F. C. ALTON.—For valuable services in H.M. Ships during the war and at the R.N. Hospital, Gibraltar.

Surg.-Lt. C. H. F. ATKINSON.—For valuable services in H.M. Ships during the war and at the R.N. Sick Quarters, Trevol.

Surg.-Lt. S. S. BARTON.—For valuable services in H.M.S. *Dwarf* and at the R.N. Hospital, Haslar.

Surg.-Lt. T. BEATON.—For valuable services in H.M. Ships during the war and at the R.N. Hospital, Chatham.

Surg.-Lt. K. B. BELLWOOD.—For valuable services in H.M.S. *Diligence*, H.M. Hospital Ship *Soudan*, and at the R.N. Hospital, Chatham.

Surg.-Lt.-Cmdr. J. C. BRINGAN.—For valuable services in several of H.M. Ships during the war.

Surg.-Lt. O. D. BROWNFIELD.—For valuable services in H.M. Ships during the war, at the R.N. Barracks, Portsmouth, and at the R.N. Hospital, Haslar.

Surg.-Lt. R. BUDDLE.—For valuable services in several of H.M. Ships during the war.

Surg.-Lt.-Cmdr. H. BURNS.—For valuable services in several of H.M. Ships during the war.

Surg.-Lt. P. N. BUTTON.—For valuable services in H.M.S. *Yarmouth* and with the 3rd R.M. Battalion in the Eastern Mediterranean.

Surg.-Cmdr. J. A. L. CAMPBELL.—For valuable services in H.M.S. *Lancaster* and as Senior Medical Officer, R.N. Depôt, Crystal Palace.

Surg.-Lt. R. S. CARRY.—For valuable services in H.M. Hospital Ships during the war and at the R.N. Hospital, Plymouth.

Surg.-Cmdr. H. CLIFT.—For valuable services in H.M.S. *Hercules* and at the R.M. Barracks, Chatham.

Surg.-Lt. W. E. DIXON.—For valuable services during the war.

Surg.-Lt. W. A. S. DUCK.—For valuable services in H.M.S. *Biarritz* and H.M. Hospital Ship *Delta*.

Surg.-Lt.-Cmdr. S. F. DUDLEY.—For valuable services in H.M. Hospital Ship *Agadir* and at the R.N. Hospital, Chatham.

Surg.-Lt. (acting Surg.-Lt.-Cmdr.) G. E. D. ELLIS.—For valuable services in several of H.M. Ships during the war and at H.M. Dockyard, Sheerness.

Surg.-Lt. F. B. EYKYN.—For valuable services with the R.N. Division, at the R.N. Infirmary, Eastney, and at the R.N. Barracks, Portsmouth.

Surg.-Lt. J. G. A. FAIRBANK.—For valuable services in H.M.S. *Bacchante* and at the R.N. Barracks, Chatham.

Surg.-Lt. M. FAWKES.—For valuable services in H.M. Ships during the war, at the R.N. Hospital, Haslar, and at the R.N. Air Station, Barrow.

Surg.-Lt. G. W. M. FINDLAY.—For valuable services as Medical Officer of the Royal Naval Depôt, Port Said.

Surg.-Lt. E. R. FLETCHER.—For valuable services to the R.N. Barracks, Devonport.

Surg.-Lt. T. E. FRANCIS.—For valuable services in H.M.S. *Britannia*, H.M. Hospital Ship *Soudan*, and at the R.N. Hospitals, Haslar and Plymouth.

Surg.-Lt. W. L. M. GOLDIE.—For valuable services in H.M. Ships during the war, at the R.N. Hospital, Chatham, and at the R.N. Infirmary, Deal.

Surg.-Lt. L. S. GOSS.—For valuable services in H.M. Ships during the war and at the R.N. Seaplane Station, Port Said.

Surg.-Lt.-Cmdr. S. W. GRIMWADE.—For valuable services in H.M.S. *Erebus* and at the R.N. Hospital, Malta.

Surg.-Cmdr. T. D. HALAHAN.—For valuable services in H.M.S. *King George V.* and at the R.N. Sick Quarters, Shotley.

Surg.-Lt.-Cmdr. (acting Surg.-Cmdr.) W. E. HARKER.—For valuable services as Senior Medical Officer, Tyne District.

Surg.-Lt. A. E. HERMAN.—For valuable services in H.M. Hospital Ships during the war and at the R.N. Barracks, Devonport.

Surg.-Lt. E. C. HOLTOM.—For valuable services in several of H.M. Ships during the war and with the R.M. Division, Chatham.

Surg.-Cmdr. C. H. M. HUGHES.—For valuable services at the R.N. Hospital, Chatham.

Surg.-Lt.-Cmdr. T. W. JEFFERY.—For valuable services in several of H.M. Ships during the war.

Surg.-Lt. J. LAMBERT.—For valuable services in H.M. Hospital Ship *Rewa*, at the R.N. Sick Quarters, Shotley, and at the R.N. Barracks, Devonport.

Surg.-Lt. D. LORIMER.—For valuable services in H.M.S. *Bacchante* and at the R.N. Hospital, Granton.

Surg.-Lt. G. R. LYNCH.—For valuable services at the R.N. Hospital, Malta, R.N. College, Greenwich, and R.N. Depôt, Crystal Palace.

Surg.-Lt. R. G. LYSTER.—For valuable services in H.M. Ships during the war and at H.M. Dockyard, Rosyth.

Surg.-Lt.-Cmdr. G. R. McCOWEN.—For valuable services in various theatres of the war.

Surg.-Lt. H. C. MANN.—For valuable services in H.M.S. *Duncan*, at the R.N. Hospitals, Plymouth and Malta, and at the R.N. College, Osborne.

Surg.-Lt. H. P. MARGETTS.—For valuable services in H.M.S. *Barham*, at the R.N. Barracks, Portsmouth, and in the Piræus.

Surg.-Cmdr. W. L. MARTIN.—For valuable services in the Medical Department, Admiralty.

Surg.-Lt. C. F. MAYNE.—For valuable services in H.M.S. *Kildonan Castle*, with the R.N. Division, and at the R.N. Hospital, Chatham.

Surg.-Cmdr. C. W. MORRIS.—For valuable services at the R.N. Hospital, Haslar.

Surg.-Lt. A. C. MORSON.—For valuable services in several of H.M. Ships and Hospital Ships during the war and at the R.N. Hospital, Haslar.

Surg.-Lt.-Cmdr. G. NUNN.—For valuable services in various theatres of the war.

Surg.-Cmdr. W. E. ORMSBY.—For valuable services in several of H.M. Ships during the war.

Surg.-Lt. J. R. PALMER.—For valuable services at the R.N. Barracks, Chatham.

Surg.-Lt. O. PARKES.—For valuable services in H.M. Hospital Ships during the war and at the R.N. Hospitals, Chatham and Plymouth.

Surg.-Lt. H. F. PERCIVAL.—For valuable services in H.M. Ships during the war and at the R.N. Barracks, Portsmouth.

Surg.-Lt.-Cmdr. R. A. RANKINE.—For valuable services in connexion with anti-malarial work at the British Naval Base, Corfu.

Surg.-Lt. A. H. RICHARDSON.—For valuable services in H.M.S. *Humber* and at the R.N. Hospital, Chatham

Surg.-Cmdr. M. L. B. RODD.—For valuable services in H.M. Hospital Ship *Plassy* and at the R.M. Infirmary, Deal.

Surg.-Lt. E. G. SCHLESINGER.—For valuable services with the R.N. Division and at the R.M. Infirmary, Deal.

Surg.-Cmdr. H. W. B. SHEWELL.—For valuable services in H.M.S. *Euryalus* and at the R.N. Barracks, Portsmouth.

Surg.-Lt. R. E. SMITH.—For valuable services in H.M. Ships during the war, at the R.N. Hospitals, Gibraltar and Plymouth, and at the R.N. Barracks, Devonport.

Surg.-Cmdr. P. H. M. STAR.—For valuable services in H.M.S. *Conqueror* and at the R.N. Hospital, Queensferry.

Surg.-Lt.-Cmdr. (acting Surg.-Cmdr.) E. J. STEEGMANN.—For valuable services during the war.

Surg.-Lt.-Cmdr. H. E. R. STEPHENS.—For valuable services in H.M. Ships during the war and at the R.N. Hospital, Plymouth.

Surg.-Cmdr. R. W. G. STEWART.—For valuable services in the Medical Department, Admiralty.

Surg.-Lt. E. L. STURDEE.—For valuable services with the R.N. Division and at the R.N. Hospital, Plymouth, R.N. Barracks, Devonport, and R.N. Depôt, Crystal Palace.

Surg.-Cmdr. P. T. SUTCLIFFE.—For valuable services in H.M. Hospital Ships during the war and at the Medical Department, Admiralty.

Surg.-Cmdr. A. R. THOMAS.—For valuable services in H.M.S. *Talbot* and at the R.N. Hospital, Malta.

Surg.-Lt. F. THOMPSON.—For valuable services at the R.N. Hospital, Haslar.

Surg.-Lt.-Cmdr. G. G. VICKERY.—For valuable services in several of H.M. Ships during the war.

Surg.-Lt. Ll. R. WARBURTON.—For valuable services in H.M. Ships during the war and with the R.M. Division, Plymouth.

Surg.-Lt.-Cmdr. L. WARREN.—For valuable services in H.M. Hospital Ship *Agadir* and at the R.N. College, Dartmouth.

Surg.-Lt.-Cmdr. D. P. D. WILKIE.—For valuable services in H.M.S. *Glory* and H.M. Hospital Ship *St. Margaret of Scotland*.

Surg.-Lt.-Cmdr. (acting Surg.-Cmdr.) R. J. WILLAN, M.V.O.—For valuable services in H.M. Hospital Ships during the war and at the R.N. Hospital, Haslar.

Surg.-Lt. A. G. WILLIAMS.—For valuable services in H.M.S. *Ebro*, with the R.M. Division, Deal, and in Belgium.

Surg.-Lt.-Cmdr. (acting Surg.-Cmdr.) W. K. WILLS.—For valuable services in H.M. Ships during the war.

Surg.-Lt. G. E. WOOD.—For valuable services at the R.N. Barracks, Portsmouth.

Brought to Notice.

The names of the following naval medical officers have been brought to the notice of the Admiralty for valuable services in the prosecution of the war :—

Surg. Lt.-Cmdr. A. D. Cowburn; Surg. Lt.-Cmdr. H. L. Murray; Surg. Lt.-Cmdr. C. F. A. Hereford; Surg.-Lts. R. St. L. Brockman, F. C. Endean, J. C. Walker, T. C. Blackwell, H. Carlill, W. A. McKerrow, W. W. Rooke, A. L. Sutcliffe, E. G. Fisher, A. J. MacDiarmid, A. E. Sanderson, E. F. Fisher, T. Norman, T. R. G. Melrose, W. G. Robertson, J. C. H. Allan, A. C. Mooney, N. C. Carver, R. H. H. Newton, C. M. Burrell, D. A. Imrie, F. C. Newman, D. McAlpine, F. J. F. Barrington, R. T. Bailey, E. A. Green, G. E. S. Ward, I. H. Beattie, W. O. Sankey, E. A. Cockayne, A. E. W. Hird, W. I. Gerrard, H. Chitty, J. Lorimer, E. P. Punch, B. Cohen, J. R. Kay-Mouat, E. F. Murray, A. C. McVittie, W. S. Oills, A. Lawrey, E. J. Winstanley, A. H. Crook, M.C.

The names of the following civilian doctors have been brought to the notice of the Secretary of State for War for valuable medical services rendered in the United Kingdom in connexion with the war :—

F. W. Abbott, P. H. Abercrombie, R. C. Acland, W. G. P. Alpin, C. M. Anderson, Sir M. Abbott-Anderson, G. J. M. Atkinson, J. H. Badcock, E. G. Barker, J. M. Barlet, Sir T. Barlow, J. H. Barnard, F. S. Barnett, F. E. Batten, H. Beckett-Overy, Sir W. H. Bennett, G. Blacker, E. J.

Blackett, J. Blomfield, J. S. Boden, C. Bolton, E. C. Bridges, J. M. Bruce, J. M. Brydone, C. H. Bubb, W. Bulloch, H. T. Campkin, C. E. Carpmael, A. A. Carr, J. W. Carr, A. J. Carter, J. W. Caton, E. Cautley, Miss H. Chambers, A. H. Cheatle, J. Chute, H. N. Coltart, C. T. T. Comber, G. J. Conford, T. A. Coysh, J. W. Cropper, J. Cunning, E. G. C. Daniel, P. L. Daniel, the late Sir J. M. Davidson, G. F. Dickinson, T. V. Dickinson, L. C. T. Dobson, J. A. Drake, M. A. Dutch, A. M. Elliot, Sir T. Crisp English, H. L. Ewens, J. W. H. Eyre, E. H. Ezard, G. Faris, W. S. Fenwick, Sir D. Ferrier, A. H. Foster, L. Fuller, E. P. Furber, P. Furnivall, J. Gay, Miss G. Gazdar, G. G. Genge, H. T. George, E. Gillespie, L. G. Glover, Sir K. W. Goadby, Sir R. J. Godlee, W. A. Gordon, H. T. Gray, E. C. Greenwood, A. J. Gregory, H. E. Griffiths, H. B. Grimsdale, C. N. Groves, L. G. Guthrie, C. F. Hadfield, Miss E. Haigh, J. Z. Hanafy, T. E. Harwood, E. D. H. Hawke, K. R. Hay, H. Head, W. Hern, C. Higgins, C. Hodgson, D. W. C. Hood, G. H. J. Hooper, R. J. Howard, R. J. B. Howard, H. Huxley, T. B. Hyslop, Miss C. M. Ironside, W. W. James, T. H. Jamieson, W. H. Jewell, H. J. Johnson, R. G. Johnson, R. D. Kandin, B. S. Kanga, W. N. Kingsbury, M. D. B. Kinsella, A. G. Lacey, F. C. Langford, J. B. Lawford, A. Lawson, K. A. Lees, H. Lett, W. J. Lindsay, T. D. Lister, E. M. Little, Miss A. Lloyd, J. P. Lockhart Mummery, R. M. H. Low, K. F. Lund, E. Lynn, C. R. C. Lyster, Miss E. M. MacGill, C. F. Marshall, A. T. Marston, E. C. Masser, H. M. McCrea, N. McDonald, W. F. McEwen, L. H. McGavin, R. McKay, W. McLachlan, J. H. Menzies, J. Metcalfe, R. H. Miller, C. H. Mills, W. T. Mullings, J. F. Nall, J. Needham, E. M. Niall, G. P. Nicolet, F. Norman, G. Northcroft, W. J. C. Nourse, Sir W. Osler, C. D. Outred, A. W. Oxford, J. I. Palmer, J. G. Pardoe, Sir T. W. Parkinson, H. J. Paterson, L. J. Paton, J. L. Payne, F. J. Pearce, E. T. Pinhey, W. J. Potts, H. J. Pulling, A. J. Rice-Oxley, Miss M. M. Richards, A. M. Robertson, Mrs. A. L. L. C. Robson, A. R. Roche, A. Rocyn-Jones, W. Roughton, S. H. Rouquette, R. A. Rowlands, N. Rushworth, H. Sainsbury, E. A. Saunders, R. E. Scholefield, W. Shears, O. B. Shelswell, Miss A. Sheppard, D. A. Shields, J. Sinclair, G. C. Sneyd, E. L. Sortain, Sir J. P. Stewart, T. G. Stewart, J. Stirling-Hamilton, Miss F. A. Stoney, T. S. P. Strangeways, A. J. Swallow, R. J. Swan, Sir F. Taylor, J. Taylor, E. G. Thomas, G. C. Thomas, T. Thompson, J. D. Thomson, Miss M. Thorne, W. Thornely, R. Thorpe, S. A. Tidey, W. Trotter, J. Van den Broeck, J. W. T. Walker, R. M. Walker, A. J. Walton, A. H. Warde, S. J. Wareham, C. J. F. Westman, C. P. White, E. F. White, Miss E. M. White, L. E. Wigram, J. C. Wilkinson, F. W. Wilson, E. C. Young, R. A. Young.

The Territorial Decoration.—The King has conferred the Territorial Decoration upon the undermentioned officers:—Royal Army Medical Corps: Col. A. E. L. Wear, C.M.G.; Lt.-Cols. E. B. Dowsett, A. C. Gulian, J. A. Masters, J. H. Stephen, C. R. Browne, A. R. Tweedie; Maj. (Bt. Lt.-Col.) R. Griffith; Maj. (acting Lt.-Col.) H. B. Roderick; Maj. (temp. Lt.-Col.) E. W. St. Vincent-Ryan; Majs. S. W. Plummer, J. Bruce, C. R. White, A. Ehrmann, W. T. Blackledge, F. W. Johnson, F. Gracie, E. J. T. Cory, A. Price, A. Bird, F. W. Kendle (attached to R.F.A.); Capt. (acting Maj.) W. H. Brailey; Capt. W. J. Rice. Territorial Force Reserve: Surg.-Maj. A. W. Cuff, T.F.R., attached to 3rd West Riding Brigade, R.F.A.; Surg.-Maj. A. R. Stoddart, attached to 5th Batn., West Yorkshire Regt.; Maj. R. Starkey-Smith, attached to R.A.M.C.; Maj. J. E. Molson, attached to R.A.M.C.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—J. F. E. Burns and D. G. Cossham (Sects. I. and II.), Bristol; W. D. McRae (Sect. II.), London Hosp.; and H. H. Selim (Sects. I. and II.), St. Mary's Hosp.

Medicine.—E. V. Briscoe (Sect. I.), St. Mary's Hosp.; O. H. Brown (Sect. II.), Charing Cross Hosp.; J. F. E. Burns and D. G. Cossham (Sects. I. and II.), Bristol; F. I. G. Edwards (Sects. I. and II.), Royal Free Hosp. and Liverpool; C. W. Lakin (Sects. I. and II.), Guy's Hosp. and Birmingham; and H. M. Partridge, St. Bart.'s Hosp.

Forensic Medicine.—D. G. Cossham and J. H. C. Eglinton, Bristol; G. ap V. Jones, Glasgow; W. D. McRae, London Hosp.; H. M. Partridge, St. Bart.'s Hosp; and G. K. Reeves, Guy's Hosp.

Midwifery.—C. C. Bennett, Guy's Hosp.; E. V. Briscoe, St. Mary's Hosp.; D. G. Cossham, Bristol; F. C. M. Gabites, Edinburgh; and H. M. Partridge, St. Bart.'s Hosp.

The Diploma of the Society was granted to the following candidates, entitling them to practice medicine, surgery, and midwifery; J. F. E. Burns, D. G. Cossham, F. C. M. Gabites, C. W. Lakin, W. D. McRae, and H. H. Selim.

NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION.—The annual conference of this association will be held at the Central Hall, Westminster, on Oct. 16th, 17th, and 18th, the last previous conference having been held at Leeds in 1914. The following distinguished foreigners are taking part in the conference: from France, Professor Léon Bernard, Professor Calmette, Professor Courmont, and Professor Rist; from the United States, Dr. Hermann Biggs, of New York, and Professor William White, of the American Red Cross (Italy); from Italy, Professor Poli, Dr. Rasponi, and Professor Ronzoni. The full programme of the conference is not yet settled, but the main subject of consideration at the conference is the completion of tuberculosis schemes throughout the country in relation to (1) the Ministry of Health; (2) local authorities and Insurance Committees; (3) Pensions Boards and Committees (Discharged Sailors and Soldiers); (4) general practitioners; (5) Red Cross and other voluntary activities; (6) training of doctors and nurses. The morning session of the first day will be devoted to the consideration of Sections (1) and (2), the afternoon session being devoted to Sections (3) and (4). The subject for consideration at the morning session of the second day, Oct. 17th, is not yet settled, but in the afternoon Sections (5) and (6) will be discussed. The programme of the third day is as yet unsettled. Among those who will address the conference on the first day are Sir R. W. Philip, President of the Royal College of Physicians, Edinburgh, and Dr. Hermann Biggs. Addresses will be given on the second day by Professor Sir William Osler, Regius professor of medicine in the University of Oxford, and by Professor Sir Sims Woodhead, professor of pathology in the University of Cambridge. There will be addresses given during the third day's session on Tuberculosis Work for Red Cross and other Voluntary Workers, but the speakers are not yet arranged. Among the social functions a conversazione will be held on the evening of the 16th by the Association, and on the evening of the 17th Lady Glenconner, the wife of the honorary treasurer of the Association, will be At Home.

Dr. John Robinson Harper, O.B.E., of Barnstaple, has received the decoration of Commander of the Military Order of St. Avis, conferred by the Portuguese Republic.

ROYAL DEVON AND EXETER HOSPITAL.—The committee of this hospital has accepted a tender for £29,201 for the proposed extension of the hospital, and the work will be proceeded with in sections. Up to the present over £10,000 have been received for the scheme.

DORSET COUNTY COUNCIL AND TUBERCULOSIS.—The Hon. Gertrude Pitt has presented Beckford Lodge, Wilts, to the Dorset County Council for the purposes of a sanatorium for tuberculosis patients. The estate is valued at £7000. The county medical officer of health considers the premises suitable for the scheme.

A GLOUCESTERSHIRE CENTENARIAN.—Mrs. Arthur Mosley, who completed her 104th year last January, died at Cheltenham on August 15th. She was the widow of the Rev. A. Mosley, and had nine brothers and sisters; the combined ages of the ten show an aggregate of 907 years.

PRESENTATIONS TO MEDICAL MEN.—The members of the Redruth (Cornwall) branch of the St. John Ambulance Nursing Association recently presented Dr. Frank Hichens, the divisional surgeon, with a case of surgical instruments in appreciation of his services as honorary lecturer.—Mr. E. J. Domville, consulting surgeon to the Royal Devon and Exeter Hospital, has been presented by the honorary medical staff with a silver bowl and four silver candlesticks in appreciation of his practical patriotism in filling the post of resident house surgeon at the hospital during three and a half years of the war.

THE LATE MR. W. C. MENCE.—William Charles Mence, L.R.C.P., M.R.C.S., Temporary Captain, R.A.M.C., died recently at Axminster in his forty-third year. Mr. Mence was medical officer of health for Chard and was honorary surgeon to the Axminster Cottage Hospital. He had been in practice for some years in Axminster, where he was widely known and respected. He joined the R.A.M.C. shortly after the commencement of the war, and had served in Egypt, Mesopotamia, and France. He had only recently returned from active service. Much sympathy is felt locally for his widow and children.

DIPLOMA IN PUBLIC HEALTH.—A course of lectures and demonstrations, extending over three months, will be given at the Western Hospital, Seagrave-road, Fulham, S.W., by Dr. R. M. Bruce, medical superintendent, on Tuesdays and Fridays, at 5 P.M., beginning Tuesday, Sept. 30th. The fee for the course is £3 3s. Medical men desiring to attend the course are required, before attending at the hospital, to pay the above-mentioned fee to the Clerk to the Metropolitan Asylums Board (Sir T. Duncombe Mann), Embankment, E.C. 4, giving their full name and address.

SOCIETY FOR THE STUDY OF INEBRIETY.—An autumn session will be held in the rooms of the Medical Society of London on Oct. 14th, preceded by a breakfast at 8.30 A.M. at the Polytechnic. The sessions commence at 10.30 A.M. and 2 P.M., followed at 5.30 P.M. by the eighth Norman Kerr lecture at the house of the Royal Society of Medicine on the Relation of Alcohol and Alcoholism to Maternity and Child Welfare, by Mrs. Mary Scharlieb, C.B.E., M.D. Communications should be made to the honorary secretary, Dr. T. N. Kelynack, 139, Harley-street, London, W.1.

Correspondence.

"Audi alteram partem."

THE CONDUCT OF LABOUR AND PUERPERAL SEPSIS.

To the Editor of THE LANCET.

SIR,—There are just three points in Dr. R. L. Kitching's letter in your issue of August 23rd to which I will briefly reply.

1. The cause of conjunctival inflammation during the first week of life of the newly-born child. For this Dr. Kitching suggests a chemical irritant in the vagina, possibly lactic acid. We know that in strengths of 50 to 75 per cent. solutions lactic acid is a caustic. We shall therefore not be far wrong if we assume a 10 per cent. solution of the acid in the vaginal discharge during labour to be necessary for the production of actual inflammation of the conjunctiva. It is characteristic of all chemical irritants that they produce their effects within a very short time of application. It therefore follows that ophthalmia should declare itself in the eyes of the child at latest within two or three hours of birth. The delay of from four to seven days before it makes its appearance seems strange on this hypothesis. There is also another difficulty in the way, and that is the presence of lactic acid itself in the vaginal discharge in concentration sufficient to produce the required result. The information which Dr. Kitching would like to have as to what numbers become infected after birth was arrived at many years ago, and was apparent, not only to those who attended labour in those days, but also to ophthalmic surgeons who saw the end-results of ophthalmia neonatorum in these eyes. It would be impossible to obtain statistics now because we eradicate and suppress the evidence of maternal infection by immediate attention to the eyes of the newly-born child. There is also one other fact that points to the maternal passage as the source of infection—and that is, that after the first week of life the susceptibility of the child to acute inflammatory infections of the conjunctiva vanishes, although its environment remains the same.

2. While admitting the soiling of the genital passages in the various ways that I pointed out, Dr. Kitching believes that the vagina is able to deal with these organisms and sterilise itself. The vagina, so far as one can see from its structure, possesses no means of defence against intruding organisms. It has no adenoid tissue, no glands, and it is lined with squamous epithelium. It has, however, a great many folds and recesses, within which organisms would find a convenient resting place. Nor has the uterus any particular power, so far as we know, of destroying organisms. The spread of venereal disease shows the vagina is powerless to deal with invading organisms, and the occurrence of gonorrhœal ophthalmia in the newly-born child is proof positive that the vagina of the pregnant woman is equally defenceless. The argument from analogy furnishes just as conclusive proof that cavities and canals far more highly endowed by Nature than the vagina to deal with organisms are often powerless to rid themselves of their invaders. I need only point out the persistence of Klebs-Löffler bacilli, meningococci, and pneumococci in the naso-pharynx for months; of *Bacillus typhosus*, *B. paratyphosus*, bacillus of Shiga, and streptococci in the bowel; of *Bacillus coli* and streptococci in the urinary passages.

3. The operation area in a confinement extends from uterus to perineum, and the management of a normal labour is primarily the care of a wound. In an ordinary operation the surgeon inflicts the wound and is careful to interfere with it as little as possible. In labour Nature inflicts the wounds, and in doing so pours out a serous exudate with intent to sterilise and wash out the passage along which the fœtus will pass. I tried to point out the various ways in which sepsis might be introduced into the maternal passage before labour began, and instanced conjunctival infection of the newly-born child in proof of my contention of vaginal sepsis. Until ophthalmia neonatorum has been explained away and the maternal passage exonerated it is a legitimate assumption that the operation area of the medical attendant at a confinement may contain septic organisms before labour begins, and that great caution should be exercised in the making of internal examinations. To Dr. Kitching this is only worth a ponderous joke.

I am, Sir, yours faithfully,

Steele's-road, N.W., August 24th, 1919. J. H. E. BROCK.

THE VERNON-HARCOURT INHALER.

To the Editor of THE LANCET.

SIR,—In your obituary notice of the late Mr. A. Vernon-Harcourt, F.R.S., you animadvert upon the chloroform inhaler associated with his name. I am sure the writer has no wish to prejudice the use of the inhaler by a rather disparaging criticism upon it. It is suggested that "clinical authorities" maintain: (1) "that chloroform accidents cannot be entirely prevented by regulating chloroform percentages"; (2) the inhaler proves useful for cases "in which a light anæsthesia" is required; (3) the risk of using a dosimetric inhaler is that while it suggests security it may divert the anæsthetist's attention from his patient's condition. Some confusion is caused by mixing the findings of the Chloroform Committee with the use of the inhaler. The Committee never stated that any inhaler or method could wholly avert chloroform fatalities. It, however, contended that such deaths were commonly the result of employing concentrations of vapours the strength of which could only be guessed at by the anæsthetist. This applies alike to excessive or too tenuous strengths of vapour. The Committee, not Mr. Harcourt, adopted the 2 per cent. value as the usual maximum, following the findings of Paul Bert and others. This was done after a great deal of careful experimentation, the protocols of which are to be found in the report. Mr. Harcourt's inhaler can be graded for any strength vapour, it is a question of physics, but he was requested to adopt the 2 per cent. maximum. This was done, although during experiments 2·5 per cent. and 3 per cent. vapours were used from the inhaler. A simple device secured this.

Of course I do not know what clinical authorities are referred to, but I doubt whether those who criticised in the way indicated had enjoyed a wide experience of the use of the inhaler, say a thousand or so cases. As to the third point, having had a rather wide experience in the use of the Vernon-Harcourt inhaler, I may, perhaps, be allowed to quote from my article dealing with the matter,[1] which received the approval of the Committee. I wrote:—

"It cannot be too strongly insisted upon that the Vernon Harcourt regulator is only a means to an end. It supplies a fairly accurate method of regulating the percentage of chloroform presented to the patient, but it does not, nor can any inhaler, abrogate the necessity for a competent knowledge of the action of chloroform on the human subject and experience in administering that anæsthetic. *The apparatus need not, and must not, detach the chloroformist's attention from his patient's condition;* it merely enables him to increase or decrease the dose of chloroform as may be necessary. Observation of the patient's condition will indicate when the necessity arises."

Finally, I should like to suggest that the implication that the Vernon-Harcourt inhaler is only useful when a light anæsthesia—i.e., a narcosis below Snow's third degree—is required is inaccurate. It can induce full anæsthesia and even a deeper narcosis in cases of prolonged administration. This assuming that the person using it does so efficiently.

I am, Sir, yours faithfully,

August 29th, 1919. DUDLEY W. BUXTON.

*** We had Dr. Buxton's book before us, and noted the passage which he quotes. Other authorities disagree with Dr. Buxton as to the range of utility of the ingenious Vernon-Harcourt inhaler.—ED. L.

THE INCIDENCE OF TUBERCULOSIS AMONGST ASYLUM PATIENTS.

To the Editor of THE LANCET.

SIR,—The paper on this subject by Dr. F. A. Elkins and Dr. Hyslop Thomson in your issue of August 9th and the subsequent letters from Dr. F. E. Tylecote and Dr. H. K. Abbott have been read by me with great interest, for I was chairman of the Tuberculosis Committee of the Medico-Psychological Association appointed in 1901, and have taken always a keen and active interest in tuberculosis, not only among the insane, but also among the poorer classes in this country. The Tuberculosis Committee of the Medico-Psychological Association was elected as a result of an excellent essay by Dr. F. G. Crookshank, which gained for him the medal of the association, and which was published in the *Journal of Mental Science* in October, 1899. Dr. Crookshank's clear and concise conclusions were endorsed in the Report of the Tuberculosis Committee, who received from medical superintendents of the asylums for the insane in Great Britain invaluable answers to specific questions.

[1] Anæsthetics, p. 249.

This Report was, unfortunately, shelved by reason of minor errors in the statistical figures, though it was admitted by the Association that these errors in no way altered the real value of the document. The Report was published, and can no doubt be obtained from the secretary of the Medico-Psychological Association.

Practically very little has been done, and the death-rate of tuberculosis in asylums is still increasing. The Board of Control recognise this fact, but simply make recommendations and insist on nothing. If they have no power under the Lunacy Act of 1890 to enforce their recommendations, why do not they obtain that power or urge the Ministry of Health to obtain it for them? I have pointed all this out in a recent book of mine. Something more must be done. A Ministry of Health is about to open a campaign for the physical improvement of the nation. To my mind the whole question of the death-rate of tuberculosis in our large asylums is a standing disgrace to our country, and I earnestly hope something will soon be done to mitigate this crying evil.

I am, Sir, yours faithfully,

Bournemouth, Sept. 1st, 1919. L. A. WEATHERLY, M.D.

INJECTIONS OF TARTAR EMETIC IN BILHARZIASIS.

To the Editor of THE LANCET.

SIR,—In a paper on this subject published in your issue of August 9th Dr. Frank E. Taylor draws attention to the risk of antimony poisoning as the results of intravenous injections. He goes on to say that the toxicity of arsenic has been greatly reduced by introducing it in organic combination, and that it would appear highly probable that similar organic compounds of antimony could be produced combining equal therapeutic effects with diminished toxicity. As no further allusion to any such substance was made either by Dr. Taylor or by Dr. J. B. Christopherson in his letter on the same subject in the following issue, it may interest your readers to know that Dr. G. Caronia, editor of *La Pediatria*, has experimented as far back as 1916 with preparations of antimony as injections in external kala-azar and leishmaniasis. He gave the preference to acetyl-p-aminophenyl, stibiate of sodium, on account of its greater efficacy, easy absorption, and less toxicity. It is freely soluble in distilled water and contains 38·5 per cent. of antimony, and may be given in doses up to 20 cg.

I am, Sir, yours faithfully,

T. VINCENT DICKINSON.

Cadogan Mansions, S.W., Sept. 2nd, 1919.

EARLY MENTAL HOMES.

To the Editor of THE LANCET.

SIR,—It was recently stated, in answer to a question in the House of Commons, that the provision of convalescent homes for early uncertifiable mental cases (without detention and on a purely hospital basis) would come under the province of the new health authority. It is admitted that such homes would be a great boon in intercepting cases (especially those occurring among ex-soldiers) who would otherwise be relegated to asylums. The Lunacy Board, according to its annual reports, has long desired the institution of "reception houses" under its wing where early cases could be detained, say for six months, without certification—i.e., without any judicial investigation or appeal. A Bill with this object, entitled the "Mental Treatment Bill" was introduced by the Home Office in 1915, but had to be withdrawn, the House of Commons regarding it as an annulling of the safeguards of the Lunacy Act and an infringement of the rights of the individual. From recent indications it appears that a similar Bill is now again in contemplation. The Lunacy Board has, however, no jurisdiction over uncertified and uncertifiable persons; and in order that cases in the very early and most curable stages should be induced to enter these homes voluntarily (as they would enter a hospital), it is essential that the homes should have no connexion with lunacy, else they will be regarded as "half-way-houses" to asylums, and shunned by the very people for whom they are intended. Public money, if sunk in such homes, will be for the most part entirely wasted.

It is a mistake to think that legislation is needed for the provision of sanatoria which *do not involve detention*. The Public Health Act, 1875, has already conferred on borough councils the power to run hospitals, and similar powers could be readily extended to the London County Council and county councils generally. The cheering and hopeful atmosphere produced by the fact that the terms, both of admission and of stay, are *voluntary*, is in itself a most important factor in recovery. It is not the existence of legal safeguards which creates "stigma," but the fact of being subjected to detention. It is in the interest of the public that every case in which restraint is applied should be carefully investigated under judicial procedure, and the salutary provision contained in Section 315 of the Lunacy Act ought to be strengthened and not annulled. On the other hand, every case proved to be "dangerous and unfit to be at large," ought to be certified, and no trivial and uncertifiable case ought to be subjected by any underhand method to detention.

I am, Sir, yours faithfully,

S. E. WHITE, M.B., B.Sc.

Upper Montagu-street, W., August 21st, 1919.

THE ÆTIOLOGY OF INFLUENZA.

To the Editor of THE LANCET.

SIR,—Captain G. E. Beaumont in his paper on this subject in THE LANCET of August 9th records that examination of material from influenza patients has shown the presence of a "mycotic organism." I do not wish to comment on his results beyond saying that there must be rigid proof before one can accept "hyphæ, large spores, coccal clusters, small spores, tetrads, mulberry masses, chains of cocci, bacilli" as pleomorphs of the same organism. My object in writing is to point out how inadequate from the point of view of a systematist are the figures of fungi usually appearing in medical literature. In the present instance it is impossible from the diagram to hazard a guess as to the fungal genus in which the hyphal stage of the organism would normally be placed. The manner in which the spores are borne is the important point in classification, and this should be clearly shown in any figures. This can rarely be made out in film preparations, but is best studied by mounting the fungus in absolute alcohol; the preparation may be made more permanent by running in dilute glycerine and "ringing" after a week or so.

I am, Sir, yours faithfully,

J. RAMSBOTTOM.

British Museum (Natural History), August 26th, 1919.

THE RESULTS OF COMPLETE COLECTOMY.

To the Editor of THE LANCET.

SIR,—In your issue of August 9th there is a letter from Mr. J. F. Dobson, of Leeds, in reference to a paper of mine on colectomy, in which he says that the operation of complete colectomy will remain under a cloud as long as those surgeons who perform it are content to support their views by the publication of their cases in an imperfect manner. Mr. Dobson's criticism is, up to a certain point, merited, in that very few details of the after-histories of my cases were appended, but the implication that discredit must, as a consequence, fall upon the operation because such histories were unknown or unfavourable, cannot pass without comment. At the time of writing I was perfectly well aware that the condition of the patients to whom I referred was satisfactory, but I had not sufficient recent detail to make it worth while to do more than indicate in a general way that the results of the operation were good. Perhaps I took for granted in my realisation of this fact that critics would accept it as a matter of course. Since Mr. Dobson's letter appeared I have communicated with my patients again, and I hope that he will agree that the details supplied now bear out the general statement made in the paper.

Mr. Dobson mentions specially the after-progress of Cases 1 and 2. In a letter I have just received from Case 1 are these remarks: "I am in good general health; I get no pain after eating, as before the operation. I believe the operation to be a great success." He goes on to say that he is employed in one of the shipping lines in Liverpool. Nearly two years have elapsed since I operated on him. Case 2 writes that he was playing football ten weeks after the operation, and that he has had no trouble with his bowels, although they move three times a day. This colectomy was done six months ago. Mr. Dobson finally deplores the absence of "a full description of the diseased condition of

the rectum held responsible for the imperfect recovery of Case 3." But surely if a patient has ulcerative colitis of such severity as to endanger his life—as stated in my paper—and, if, after removal of the colon, he still for a time continues to pass mucus and blood in his stools, it is fair to conclude (without submitting the patient to another anæsthetic for sigmoidoscopy) that the persistence of some of the symptoms is explained by the presence of ulcers in the only remaining portion of the large bowel. This inference is supported by the statement made in the description of the case that the symptoms improved under rectal lavage and vaccine treatment. This patient has just written that he has improved very much since leaving hospital six months ago.

It is only fair to add that since my paper was written I have been asked to see Case 4 again, and have found that after 18 months of perfect health she had been taken ill with headache and vomiting. I discovered a nodular enlargement of her liver, and evidence of a metastatic growth at the base of her skull. Still, I think it is surprising that she remained well so long after the removal of such an advanced cancer of the bowel, and I do not think that anyone could regard her present condition as in any way attributable to the removal of her colon.

I am fully cognisant of the severity of the operation, and agree that it should be undertaken only to relieve a very serious condition. But I feel quite certain that there are many people whose suffering can be relieved in no other way, and I wrote the paper with the object of showing that it was possible for the operation to be performed with a moderate degree of safety even by such a tyro as myself.

I am, Sir, yours faithfully,

JAMES TAYLOR,
Major, R.A.M.C.

Aldershot, August 26th, 1919.

THE ORIGIN OF LIFE: THE WORK OF THE LATE CHARLTON BASTIAN.

To the Editor of THE LANCET.

SIR,—In your issue of August 16th Commander W. Bastian, R.N., now objects to the tubes used in my experiments. I have stated that "the tubes employed were the same as those used by Dr. Bastian,"[1] but as this seems insufficient I have written to the makers, hence the delay. They reply: "The tubes were made no doubt from soft German glass tubing, in every way the same as those supplied to Dr. Bastian." (August 20th, 1919.) Evidently Commander Bastian was misled by the word "hard," which was only used relatively, not as equivalent to Jena glass.

Commander Bastian seems still doubtful whether the experiments are not invalidated because some of the tubes were kept three years. I have explained that samples were opened about every three months, but that Professor Hopkins considered it unnecessary to give details about the whole 100 tubes. As a matter of fact, I fail to see why all the organisms must be dead in three years. Because if the conditions were ever such as to produce life, there is no reason for the conditions to change; and "organisms" would be continually coming into being and dying. Since the mass of the "organisms" is infinitely small compared with that of the salts, "live organisms" should be found after any length of time, however short-lived they might be, because the process of formation would continue until the salts were exhausted, or until some harmful end-product had been elaborated. Dr. Bastian himself uses this form of argument to prove that abiogenesis is still taking place. "Relying on the uniformity of natural phenomena, we have a right to believe ..... that the processes which originally led to the growth of living matter would constantly tend to be reproduced."[2] I should like to add, the object of my experiments was to test whether I could repeat Dr. Bastian's results. Therefore all possible precautions were taken to reproduce his conditions, by the use of the same samples, the same tubes, and the same laborious method of sterilisation. I am fully aware of the difficulty of proving a negative, therefore, though others as well as myself have had negative results, I agree with Commander Bastian in hoping he may have the satisfaction of seeing the work repeated. The positive results of one man can only be disproved by the general consensus of opinion derived from a number of negative results—as in the case of the well-known N-rays, which have been relegated to the category of faulty observation.

I am, Sir, yours faithfully,

H. ONSLOW.

The Biochemical Laboratory, Cambridge,
August 22nd, 1919.

[1] Proc. Roy. Soc., vol. xc., p. 266.
[2] "Origin of Life," p. 7.

LIFE INSURANCE AND WAR DISABILITIES.

To the Editor of THE LANCET.

SIR,—There are many questions in life insurance connected with injuries and ailments incurred during active service on which data are required. As far as mechanical injuries go there is probably nothing very novel. Limbs have been lost and injuries by bullets sustained by so many in previous centuries that a fairly clear actuarial estimate can be made of their bearing on longevity. More pressing questions are, among others, these:—

1. *Gassing.*—So far as I have seen at present a man who has been badly gassed exhibits objective signs in his lungs. Is he going to be more liable to bronchitis, pneumonia, &c.?

2. *Trench nephritis.*—Is this permanent in a majority or minority of cases? and what is the ultimate condition when the albuminuria does not clear up?

3. *Shell shock.*—Admitting the vagueness of the term, one would wish to know how far the nervous stability of the individual is likely to be affected and whether there is any connexion between the severity of the original condition and the probable sequelæ.

4. *V.D.H. and D.A.H.*—Of all the unfortunate legacies left us by the war I fear that few will lead, or have led, to more pitiable distress in the uneducated or even the educated soldier. Thousands of men are leading valetudinarian lives and causing untold anxiety to their dependants and friends because at some time their hearts responded naturally to an unaccustomed call upon their reserves. Once a man has been told, "There is something wrong with your heart," it makes him in nine cases out of ten a derelict member of society. In ninety-nine cases out of a hundred there is nothing wrong, and in the other case usually nothing that matters. An examination of all these cases by competent cardiologists would probably save tens of thousands of pounds and give back to thousands peace of mind and desire to work. It might do the latter and it might not. Personally, I have seen few cases in which the individual labelled with one of the two tags could not lead a normal life, and none that believed me. What is the best empirical test for gauging cardiac muscle condition?

Other ailments will suggest themselves, but those I have mentioned are perhaps the commonest. On the three first any data would be most welcome to those engaged in trying to foretell the future of the individual.

I am, Sir, yours faithfully,

C. WYNN WIRGMAN.

Birchin-lane, E.C., August 26th, 1919.

CRYPTOPODIA.

To the Editor of THE LANCET.

SIR,—The condition described by Dr. E. C. Bousfield under the name "cryptopodia" in THE LANCET of August 23rd is of some interest, but I doubt if it should be described as a new disease, or even as a disease. An œdematous swelling of the feet, and sometimes of the legs, is not very unusual in the infective type of rheumatoid arthritis; in patients who sit for long hours with their legs in a dependent position this œdema may become marked and resemble that seen in elephantiasis. This swelling usually subsides gradually if the limbs are kept in a horizontal position, and more quickly if massage is ordered.

Dr. Bousfield's patient seems to show this œdema in an exceptionally severe form; it is, of course, possible that in his case the condition is due to some other cause, but as he states the patient suffers from rheumatiod arthritis and does not discuss the above type of œdema in his differential diagnosis, may I point out the possibility of this being a simple explanation of the change.

I am, Sir, yours faithfully,

T. S. P. STRANGEWAYS.

Research Hospital, Cambridge, August 27th, 1919.

To the Editor of THE LANCET.

SIR,—When Dr. E. C. Bousfield demonstrated the above-named remarkable case at the recent meeting in London (July, 1919) of the Association of Physicians of Great Britain and Ireland, I had the good fortune to be present,

though his illustrated description in THE LANCET of August 23rd gives one an almost equally exact idea of the condition. I venture to suggest that it represents an *extreme* form of the class of cases which I have referred to under the heading, "Baggy Subcutaneous Fat Simulating Symmetrical Œdema of the Legs; Disorder of Internal Secretions." An outline drawing by Mr. Shiells illustrates the account of the case, which I showed at the Clinical Section of the Royal Society of Medicine on March 14th, 1913 (Proceedings, 1912–1913, vol. vi., p. 167) I should have spoken of "baggy subcutaneous *tissue*" rather than of "baggy subcutaneous *fat*." In my description I said: "There is chronic swelling of the subcutaneous tissue of the legs below the knees of one or two years' duration. This is symmetrical, and in both legs tends to *bag above the ankles*. It either does not pit at all, or it (sometimes) pits slightly on pressure." The patient in question was a woman, aged 40 years, in whom menstruation had ceased six years previously. The thyroid gland could not be distinctly seen or felt. Unfortunately an only very imperfect trial of thyroid treatment was made. There can be no doubt that in similar cases obvious symptoms of thyroidal disorder are sometimes present.

I am, Sir, yours faithfully,
F. PARKES WEBER, M.D., F.R.C.P.

London, W., August 23rd, 1919.

THE TREATMENT OF "BORDER-LINE" PENSIONERS.

To the Editor of THE LANCET.

SIR,—The question and answer reported in your Parliamentary page[1] regarding the treatment and accommodation of neurasthenic and "shell shock" pensioners on the borderline of lunacy call attention to a defect in the present administration which many of us engaged in this work have constantly brought before us. A serving soldier in a neurological hospital can, if necessity arises, be transferred quietly and without publicity to an asylum, where he is not certified until ample time has elapsed to make it evident that there is no alternative. What happens to the unfortunate discharged soldier who is similarly situated? Before he can be admitted to an asylum he must be certified and be removed by the Poor-law authorities—i.e., as a pauper. It is true that once admitted he is transferred to the "Service patient" side, but why should he not be treated similarly to the serving soldier, thus avoiding the stigma of certification and pauperism.

Medical officers of neurological hospitals are often reluctantly compelled to refuse cases such as these, which might benefit considerably by treatment, owing to the unavoidable delay, publicity, and detrimental effect on the other patients which ensue if it should become necessary to send them to an asylum through the present Poor-law channels. Moreover, a man may require closer control than the average neurological hospital can provide without being certifiable.

I am, Sir, yours faithfully,
X.

August 23rd, 1919.

THE POSITION AND PAYMENT OF THE PENSIONS BOARDS.

To the Editor of THE LANCET.

SIR,—I have noticed several letters in THE LANCET complaining about the insufficiency of the rate of pay given to the members of Pension Boards. I agree that the pay is quite insufficient to attract capable men, but there is a worse grievance than the pay, and that is the conditions of work. I am speaking of the boards at Westminster, in Clock Tower Gardens. Until a few days ago we had a long form, either 179 A or A $\frac{36}{C}$ to fill in *in duplicate*, when the second copy could well have been made by a clerk; and the chairman had to sign his name an average of eight times in each case examined, the members not quite so often. This was bad enough, but within the last few days the card index system has been introduced, and two cards and one long form are now used in each case. These cards contain a résumé of the pensioner's medical history, and précis of all previous medical boards. No doubt they will be very useful, but they should be filled up in a quiet room by a capable medical man some time *after* the board. While the chairman is making out this card one of the members is either making out a duplicate, or is filling up the long form, thus leaving the third member free to do the examination of the pensioner. He is hampered greatly in this work because the chairman, in order to fill up his card correctly, must keep the documents—M.H.S., &c.—under his eye, so that the examining doctor has nothing to guide him in the search for a disability. Later on, the card having been filled, the documents are released, and may be consulted, but much valuable time has been lost, and the examination is necessarily not so complete as if engaged in by two or by all of the members of the board.

Before this card system was introduced each board examined about 9 cases; now under the card system only 5 or 6 can be examined during a session, and even then not examined so carefully as before. The expense is great and the waste of public money is to be deplored when one considers that there are three members of each board, with supervising officers and clerks, orderlies, &c., to be paid for.

I am, Sir, yours faithfully,
MEMBER OF PENSION BOARD.

August 20th, 1919.

[1] THE LANCET, August 23rd, p. 353.

To the Editor of THE LANCET.

SIR,—I read "Medico's" letter in your issue of August 16th on the status of members of pensions boards with great interest. Our fees are certainly inadequate, but he has omitted to state that these are always several weeks in arrears. We were kept waiting till July 23rd for our June fees. Thus we were seven weeks without any pay. We have not yet received any pay for the month of July, although it is, when I write, approaching the close of the month. We feel strongly on this point. Payment should be made when it is due.

I am, Sir, yours faithfully,
DEMOBILISED MEDICO.

August 20th, 1919.

THE MARRIAGE OF ASSISTANT MEDICAL OFFICERS AT ASYLUMS.

To the Editor of THE LANCET.

SIR,—I hope that the letter of "Dismissed" in your issue of August 9th will not pass without proper notice. Such injustice cannot be too strongly condemned. At a time when we have just concluded a war for freedom and justice to think of this instance of man's inhumanity to man and to his rights as a citizen makes one rise in anger and protest. What possible harm could be done by retaining a married man, especially as this officer was actually willing to allow his wife to live away from his professional residence, so that his position might not be lost? Surely the Commissioners of the Board of Control should take action in this matter and see who is to blame—the committee or medical superintendent.

A spirit of antagonism against one's employers is to be deprecated, but it is not to be wondered that organisations are made to defend the victims of such lack of consideration and unjust treatment. The Association of Assistant Medical Officers might now be revived seeing that A.M.O.'s are back at their old work. The advantages of being married in the case of medical officers of asylums, who have to live among special environments and temptations, are so apparent that no further observations on the matter are necessary.

I am Sir, yours faithfully,
A MARRIED A.M.O.

August 20th, 1919.

BOOKS, ETC., RECEIVED.

ADLARD AND SON, London.
Hunterian Oration on British Military Surgery in the Time of Hunter and in the Great War. By Sir Anthony Bowlby, Temporary Major-General, A.M.S. Pp. 48.

ALBANY PRESS, Bromley-place, Fitzroy-square, W.
Lectures on Venereal Diseases. By L. Myer, F.R.C.S. Pp. 88. 6*s.* post free.

MACMILLAN (THE) CO., New York.
Elements of Pediatrics for Medical Students. By R. G. Freeman, M.D. Pp. 290. 10*s.* 6*d.*

MURRAY, JOHN, London.
Through a Tent Door. By R. W. Mackenna, M.D., R.A.M.C. Pp. 310. 8*s.*

UNWIN, T. FISHER, London.
The Religion of a Doctor. By T. Bodley Scott. Pp. 98. 5*s.*
Boy-Work: Exploitation or Training. By Rev. S. J. Gibb. Pp. 223. 8*s.* 6*d.*

WRIGHT, JOHN, Bristol.
National Health. By F. Rees, M.D. Pp. 68. 1*s.* 6*d.*

Obituary.

CHARLES ARTHUR MERCIER, M.D., F.R.C.P. LOND., F.R.C.S. ENG.,

CONSULTING PHYSICIAN FOR MENTAL DISEASES, CHARING CROSS HOSPITAL; LATE PRESIDENT OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

WITH the death of Charles Mercier at Bournemouth, in his sixty-seventh year, medicine has lost one of its ablest dialecticians, whose erudition, wisdom, and humour enabled him to make valuable contributions in that dim borderland where psychology and insanity meet.

Charles Arthur Mercier was born in 1852, the son of the Rev. L. P. Mercier, and was educated at Merchant Taylors School. His family was left in poor circumstances on the death of his father, and he became a cabin boy, in which capacity he sailed to Mogador, and later a clerk in a warehouseman's office in the City of London. At this time, fortunately, he became in a position to follow his natural bent and study medicine. He joined the London Hospital Medical School, and from that school took the M.R.C.S. in 1874, the L.S.A. in 1877, and the M.B. Lond. in 1878. To these primary diplomas he subsequently added the higher medical and surgical distinctions, taking the F.R.C.S. Eng. in 1878, being elected F.R.C.P. Lond. in 1904, and being awarded the M.D. Lond., with gold medal in mental science, in 1905. At the London Hospital he fell under the influence of that master of scientific medicine, Hughlings Jackson, whose keen and intensive studies in neurology formed the starting point of his pupil's interest in the subject of psychology in a wide sense. At first a close student of Herbert Spencer, Mercier subsequently struck out a direction of his own, based on his personal work. He held posts of medical officer in two large public asylums, the Buckinghamshire County Asylum at Stone and the City of London Asylum, and after relinquishing these appointments he became for the greater part of his life resident physician at a private asylum. He made full use of his opportunities for a close study of lunacy, and from his personal daily work he evolved a philosophy of life, which he exposed with frankness and defended with tenacity. What proportion of the world Mercier considered to be a little mad it would be hard to say, but he was a very genuine friend to the insane. It was largely owing to his unceasing zeal that a Bill was introduced several times in Parliament to legalise the treatment of insanity in its early stages, and it is regrettable that he did not live to see what can hardly fail to be the full fruition of his and others' labours in the near future. The legal standing of the lunatic was his particular care, and he was a valuable member of the Medico-Legal Society, where his early contributions were of a highly interesting nature. Some of our readers may recall the discussion of a problem arising out of a paper by Mercier, and illustrated by a case tried at Stafford. It came out in that debate that the law had overlooked the possibility that a sane person might be prevented, by deafness and inability to read, from understanding the proceedings in a court of law. Mercier's equal facility on the medical and legal side of mental disease long served the Medico-Legal Society in good stead, while he himself thoroughly enjoyed his forensic excursions.

As a writer Mercier's genius found its particular expression. From his first contribution on a Classification of Feelings in *Mind* (1884) to his last work on "Crime and Criminals" (1918) he never wrote a slovenly sentence and never spared himself the most assiduous effort to make his meaning clear and precise to his readers. His "Text-book on Insanity," appearing in 1902, was the first comprehensive view of insanity in its practical aspects. Within a moderate compass, available to the student and practitioner of medicine, his logical mind delineated forms and varieties of insanity as types, with illustrative examples culled from his own abundant clinical experience. It speaks much for his mental fertility that this text-book appeared almost at the same time as his work on "Psychology, Normal and Morbid," which was largely responsible for making his name known as a writer in wider circles of philosophy. In this book he approached psychology from the subjective side, treating morbid conditions in the light of normal conditions working inharmoniously, and making no attempt to connect the manifestations of mental alienation with definite morbid lesions of the brain. The close and accurate reasoning and the facility in the statement of abstract propositions which characterised all his later work were present here. In his last book Mercier turned again, as was his wont, to first principles. He proposed to discover the foundations upon which criminal law rests, so as to determine in what directions improvement was possible. His chapters on the prevention, detection, and punishment of crime are of great general interest, and his definition of crime as "due to temptation or opportunity, the environmental factor of stress, acting upon the predisposition of the offender, the inherent or constitutional factor," is a convincing example of Mercier's clearness of thought and absence of acquired prejudice. This able, useful, and original book earned for him for the second time in succession the Swiney prize. He also wrote a book on logic, which failed to find acceptance.

Mercier revelled in argument, and for a time he may be better remembered as a dialectician than as a fine writer and a constructive sociologist. But the fame of dialectics is transitory, and, good controversialist as Mercier was, he certainly sacrificed points to a desire to score, and he allowed his wit to run away with his judgment. Often his nimbleness of brain led him beyond the position which could be taken up by strict logic. He had for many years been a serious invalid, and at no time lately would his death have caused any surprise. We have lost in Mercier one of the most sheerly clever men who ever adorned the ranks of medicine. And behind the cleverness lay a mass of solid learning.

WILLIAM ANGUS, M.D. ABERD., D.P.H.,

MEDICAL OFFICER OF HEALTH FOR THE CITY OF LEEDS.

THE untimely death of Dr. William Angus, M.O.H. for the city of Leeds and professor of public health in the University, cuts short a career of great promise.

William Angus was born in Aberdeen in 1884, and was a student there as well as at University College, London. He qualified in 1909 after obtaining many academic honours, including the Mather scholarship in medicine. For 18 months he held the position of senior assistant medical superintendent at St. Pancras Infirmary, London, and in January, 1911, began his public health work proper, being in succession assistant medical officer of health for Hertfordshire, for Ipswich, and for Leeds. In February, 1917, he became chief health officer for the city, and in June of the same year he volunteered for active service with the R.A.M.C., becoming A.D.M.S. (Sanitation), with charge of the sanitary arrangements in connexion with the 1st Echelon in Egypt. On returning to this country in February last he threw himself into the work of the organisations of which, apart from his official duties, he had been a moving spirit. Foremost among these was the Maternity and Child Welfare Scheme, for the organisation and development of which he was largely responsible. His efforts won a competitive shield for the best organised "Baby Week" throughout the country. He also took a keen interest in the organisation of tuberculosis relief measures.

One of his colleagues (J. J. J.) writes thus of him:—

"When Angus came to Leeds in 1913 he came full of freshness and vigour. He had been an athlete in his student days at Aberdeen University, and his carriage and bearing bore testimony to the excellence of his training. The uprightness of his body was an index of the uprightness of his mind. He was a true Scot—straight, clean, and honest, conscientious to a fault, firm to his convictions, and loyal to his friends. He said little, but what he did say he said with a directness and precision which carried conviction; he had no time for superfluity of speech. One reason for his success was the easy way in which he could grasp things and, when once within his grasp, retain them. He could sum up a situation in a trice, and his conclusions were invariably correct. Like the sons of the North, he was something of a mystic, a dreamer, only in his case his dreams were not nebulous but very real things. He was a man of ideals, and his life and work in Leeds furnished him with scope enough for their development. In his public life Dr. Angus was imbued with the one idea of serving his fellow men faithfully and leaving the world and the city of his adoption the better for his life's endeavours. For himself he desired nothing, only to fill the niche allotted to him in the world and complete his appointed task in such a manner as to win the approbation of his generation."

And another (M. J. S.) adds:—

"A man of sterling and transparent honesty and high purpose, Angus combined in a remarkable degree the

qualities of the idealist and the man of action. The possessor of great executive ability and sound common sense, he impressed all with whom he came in contact by his breadth of vision and power of grasping the essentials of a situation. He was a man of few words, but those well chosen, cogent, and to the point. His clarity of expression is well exemplified in his admirable report, just published, on malaria in the Egyptian Expeditionary Force during 1918, a document of high scientific and historical importance. Of the quality of Angus's professional work it is impossible to speak too highly. All of it was done with energy and enthusiasm, and he would tackle the biggest and most difficult problems with the keenest possible zest and determination. In the academic sphere, as professor of public health in the University of Leeds, he was equally successful. He enjoyed to the full the confidence of his colleagues, and one felt that in these days of change and reconstruction Angus, the steady, wise, and clear visioned, was the right man in the right place."

Personally, William Angus was a most lovable man and a delightful companion, and his death leaves a gap in the circle of his friends which it will be impossible to fill. To his wife and two little daughters goes out at this time the heartfelt sympathy of all their friends.

SKENE KEITH, M.B., F.R.C.S. EDIN.

THE death of Mr. Skene Keith, which occurred on August 19th after a week's illness from pneumonia, follows closely on that of his brother, Dr. George Keith, who died last December from the same cause. With little outward show, Mr. Skene Keith achieved no small success as an operating gynæcologist, and his death will be felt as a loss over a wide circle. Both brothers inherited something of the diagnostic acumen and manual dexterity of their father, Dr. Thomas Keith, well known in his time as a pioneer of ovariotomy. Many years ago Mr. Skene Keith published his first hundred cases of ovariotomy, with a mortality of rather under 3 per cent., and his results improved still further as time went on. He came to London while still a young man and was appointed to the staff of the Samaritan Hospital, but returned shortly after to Edinburgh to assist his father, until both came to London at a later time. Mr. Keith's "Text-book of Abdominal Surgery" (1894) and his "Gynæcological Operations" (1900), the former in collaboration with his brother, Dr. George Keith, were his principal published works.

THOMAS TORKINGTON BLEASE, M.R.C.S. ENG., L.S.A. LOND.

Thomas Torkington Blease was born in Altrincham, Cheshire, on Oct. 4th, 1835. He was the son of Thomas Blease, L.S.A., who was born at Altrincham in 1804, and after qualifying practised there until his death in 1883. Father and son were together in practice for 27 years, then Mr. Thomas Torkington Blease carried on the practice for 21 years, when he in his turn was joined by his only son, who survives him. Mr. Blease qualified in 1856, after studying at the Manchester Royal Infirmary and the Pine Street School of Medicine, and also in London. He at once commenced practice in Altrincham and in 1858 founded the Altrincham Provident Dispensary, which later became, and still continues as, the Altrincham Provident Dispensary and Hospital. To this institution, of the success of which he was justly proud, he gave devoted service for more than 40 years. In May, 1869, he was appointed medical officer for the Altrincham district of the Bucklow union and held this post until August, 1912. For 45 years he was medical officer to the Great Central Railway Mutual Provident Society, and on his retirement in 1908 he was the recipient of an illuminated address from the members. He also held numerous appointments with other friendly societies. He most thoroughly approved of the principle of these efforts of the working classes to help themselves, and won the unbounded esteem of their members by the way in which he never spared himself in connexion with such work.

Until comparatively recently he enjoyed remarkably good health; when over 70 years of age no amount of night work seemed to make any difference to his ability to carry on as usual during the day, and by this infinite capacity for work he was able, while holding all the above appointments, to have for over 60 years, first in association with his father, then single-handed, and later in association with his son, an extensive private practice which alone was as much as most men could have done even for a much shorter period.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BARNES, H. W., M.B., B.C. Cantab., D.P.H., has been appointed Medical Officer of Health and School Medical Officer for Yeovil (Somerset).

GUNN, W., M.B., Medical Officer for the Wadebridge (Cornwall) District of the Bodmin Union.

HAYCRAFT, GUY F., M.R.C.S., L.R.C.P., Honorary Ophthalmic Surgeon to the Walsall General Hospital.

LANGLEY, GEORGE JOHNSON, B.S., M.D. Lond., Honorary Assistant Physician to Salford Royal Hospital.

SMITH, R. WAYLAND, M.B., Ch.B. Edin., Senior Resident House Surgeon at the Royal Devon and Exeter Hospital.

STURROCK, ALEXANDER CORSAR, M.A., M.D. Edin., M.R.C.P. Lond., Honorary Physician to Salford Royal Hospital.

SUTHERLAND, R., M.B., Ch.B. Vict., Temporary Medical Officer of Health for Chard (Somerset).

Leicester Royal Infirmary: CROSBY, T. V., M.D. Lond., Honorary Physician; SLIGHT, J. D., M.D. Edin., and FOSTER, A., M.D. Edin., Assistant Physicians; LAWSON, R. S., M.B., Ch.B. Edin., F.R.C.S. Eng., Assistant Surgeon.

Queen Charlotte's Lying-in Hospital: DAVIES, TREVOR B., M.D., M.R.C.P., F.R.C.S., Obstetric Surgeon to Out-patients; DEARNLEY, GRACE, M.D., Medical Officer to the Antenatal Department; WILLMORE, J. GRAHAM, M.R.C.S., L.R.C.P., Pathologist and Registrar

Certifying Surgeons under the Factory and Workshop Acts: DUNCAN, J. M., M.B., Ch.B. Aberd. (Ascot); DEVINE, J. A., M.D. Dub. (Newhaven); BAKER, J. E., M.D., B.Hy. Durh. (Tynemouth); BABST, E., M.B., B.S. Durh. (Wallsend-on-Tyne); LIBBEY, E. O., L.S.A., L.M.S.S.A. (Scarborough); PAYNE, R. W. (Lavenham).

Vacancies.

For further information refer to the advertisement columns.

Aylesbury, Royal Buckinghamshire Hospital.—H.S.
Barbados General Hospital.—Sen. Res. S. £300.
Battersea General Hospital, Battersea Park, S.W.—Res. M.O.
Birkenhead Borough Hospital.—Jun. H.S. £170.
Birkenhead Union Infirmary.—Res. Asst. M.O. £300.
Bridgend Urban District Council, Penybont Rural District Council.—Joint M.O.H. £600.
Brighton, Royal Sussex County Hospital.—H.P. £100.
Bristol Eye Hospital.—H.S. £150.
Bristol General Hospital.—H.S., Obstet. O., and H.S. Also Two H.P.'s. £175.
Burnley Union Workhouse.—Res. M.O. £400.
Cambridge, Addenbrooke's Hospital.—Hon. Asst. P. and Hon. Asst. S.
Cancer Hospital (Free), Fulham-road, S.W.—Two H.S.'s. £150.
Cardiff, King Edward VII.'s Hospital.—Hon. S. and Hon. Asst. S.
Central London Ophthalmic Hospital, Judd-street, St. Pancras, W.C.—H.S. £50.
Chartham, near Canterbury, Kent County Mental Hospital.—Jun Third Asst. M.O. £300.
Chester Royal Infirmary.—H.P. £150.
Chichester, Royal West Sussex Hospital.—H.S. £200.
Derbyshire Royal Infirmary.—H.P. £200.
Devonport, Royal Albert Hospital.—Res. H.S. £200.
Dumfries, Crichton Royal.—Asst. P. £300.
Durban, Government Hospital.—Asst. M.O. £400.
East Riding Education Authority.—Female Asst. Sch. M.O. £350.
Finchley Urban District.—M.O.H. and Sch. M.O. £600.
Glamorgan County Asylum, Bridgend.—Fourth Asst. M.O. £400.
Glasgow, Hawkhead Asylum, Cardonald.—Jun. Asst. M.O. £275.
Glasgow, Scottish Western Asylum Research Institute.—Director. £600.
Hackney and Stoke Newington, Metropolitan Boroughs of.—Tuberc. O. £500.
Halifax Royal Infirmary.—H.S. £200.
High Wood, Brentwood, Essex.—Med. Supt. £600.
Huddersfield Royal Infirmary.—Asst. H.S. £100.
Hyde Borough.—M.O.H. and Female Asst. M.O. £700 and £400 respectively.
Italian Hospital, Queen-square, W.C.—Hon. Oph. S.
Leeds Neurasthenic Hospital for Pensioners.—M.O. £400.
Leeds Public Dispensary, North-street.—Res. M.O. £200.
Leicester Royal Infirmary.—H.S.'s. £250. Also Ear and Throat Surg.
Liverpool Royal Infirmary.—Hon. Asst. Gynæcol. S
Liverpool, Royal Southern Hospital.—Two H.P.'s and Three H.S.'s. £100.
London County Mental Hospital, Bexley, Kent.—Temp. Asst. M.O. 7 gns. a wk.
Maidstone, Kent County Ophthalmic Hospital.—Hon. Oph. S.
Maidstone, West Kent General Hospital.—Jun. H.S. £150.
Manchester Northern Hospital for Women and Children, Park-place, Cheetham Hill-road.—H.S. £150.
Manchester, St. Mary's Hospitals for Women and Children.—Two H.S.'s. £100.
Melbourne University.—Lecturer in Pathology. £600.
Metropolitan Hospital, Kingsland-road, E.—H.S., Asst. H.P., and Asst. H.S. £100.
Newcastle-upon-Tyne, University of Durham College of Medicine and Royal Victoria Infirmary.—Jun. Demons. in Path. and Asst. to Pathologist. £300.
Northampton County Mental Hospital, Berrywood.—Jun. Asst. M.O. £300.
Northampton General Hospital.—Pathologist. £750.
Nottingham Children's Hospital.—Female Res. H.S. £250. Female Res. H.P. and Anæsth. £200.

Nottingham General Hospital.—Two H.P.'s. Also Two H.S.'s. £150.
Queen Charlotte's Lying-in Hospital, Marylebone-road, N.W.—Dist. Res. M.O. £80.
Richmond, Surrey, Royal Hospital.—H.S. £150.
Rotherham Hospital.—Jun. H.S. £150.
Royal National Orthopædic Hospital, 234, Great Portland-street, W.—H.S. £200.
St. Mary's Hospital for Women and Children, Plaistow, E.—Res. M.O. £200. Also Hon. Gynæcologist.
St. Peter's Hospital for Stone, &c., Henrietta-street, Covent-garden, W.C. Jun. H.S. £75.
Salford Royal Hospital.—Hon. Dent. S. Also Res. Surg. O., H.P., H.S., and Jun. H.S. £250, £200, £150, and £125 respectively.
Scarborough Hospital and Dispensary.—Two H.S.'s. £150.
Sheffield City Education Committee.—Sch. Dental S.'s. £400.
Sheffield Royal Infirmary.—H.S. for Ear, Nose, and Throat. £150.
South Africa, Mental Hospital Service.—Asst. P.'s. £380.
Southampton, Free Eye Hospital.—H.S. £150 to £200.
Southwark Borough.—Female Asst. M.O.H. £400.
Swansea General and Eye Hospital.—H.S. £250.
Ulverston, High Carley Sanatorium.—Asst. Tuberc. M.O. £350.
University College Hospital, Gower-street, W.C.—Asst. S.
Wallasey, Victoria Central Hospital.—Hon. Ophth. S.
Walsall General Hospital.—Female H.S. and Anæsth. £175.
Wilts County Council.—Sch. Dentist. £350.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies for Inspectors under the Factory and Workshop Acts at Killough and Luddenden, Brigg (Lincoln), Dartford (Kent).

THE Secretary of State for the Home Department gives notice that in consequence of the death of Mr. F. Wilson, one of the Medical Referees under the Workmen's Compensation Act, 1906, for County Court Circuit No. 28, the appointment held by him is vacant. Mr. Wilson was attached more particularly to the Aberystwyth, Dolgelly, Llanidloes, Machynlleth, and Newtown County Courts. Applications for the post should be addressed to the Private Secretary, Home Office, and should reach him not later than Sept. 11th, 1919. Notice is also given that in consequence of the resignation of Mr. J. L. Russell, one of the Medical Referees under the Workmen's Compensation Act, 1906, for County Court Circuit No. 12, the appointment held by him is vacant. Mr. Russell was attached more particularly to the Todmorden County Court. Applications for the post should be addressed to the Private Secretary, Home Office, and should reach him not later than Sept. 25th, 1919.

Births, Marriages, and Deaths.

BIRTHS.

BROOKS.—On August 31st, at Beaufort House, Grange Park, Ealing, the wife of Captain Ralph St. John Brooks, R.A.M.C., of a son.
HENRY.—On August 19th, at The Croft, Sandon-road, Edgbaston, the wife of A. E. Henry, B.Sc., L.D.S., of a son (Richard Montagu).
LESLIE.—On August 27th, at a nursing home, the wife of Captain W. Leslie, M.C., R.A.M.C., of a son.
OSBORN.—On August 21st, at Sheet-street, Windsor, the wife of Dr. A. G. Osborn, of a son.
PORTEOUS.—On August 26th, at Drumsheugh-gardens, Edinburgh, the wife of W. J. Porteous, M.B., Ch.B. Edin., of a son.
STEPHENS.—On August 26th, at Fair Elms, Sandown, the wife of J. B. Stephens, M.B., B.S. Lond., of a daughter.
WHITEHEAD.—On August 24th, at Rougemont, Salisbury, the wife of Brian Whitehead, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

MARRIAGES.

DEBENHAM — ARCHER-SHEE. — On Sept. 2nd, Leonard Snowden Debenham, M.B., B.S., B.Sc., to Anna, daughter of the late Martin Archer-Shee, of Bristol and Nailsworth, Gloucestershire.
ELLIOT—HAMILTON.—On August 27th, at St. Margaret's, Westminster, Captain W. E. Elliot, M.P., M.C., R.A.M.C., to Helen A. Hamilton, eldest daughter of Lieutenant-Colonel D. L. Hamilton, R.A.M.C.(T.).
EWENS—KELLEHER.—On Sept. 1st, Bernard C. Ewens, M.B. (late Captain, R.A.M.C.), to Mary, daughter of the late James Kelleher, D.L., Bengal Civil Service (retired), and of Mrs. Kelleher, Goderich, Ontario.
GARDNER—PONTON.—On August 21st, at All Souls Church, Langham-place, W., Humphrey D. Gardner, Captain, R.A.M.C., to Phyllis Ponton.
HUNTER—KEMPSON.—On August 21st, at the Chapel Royal, Savoy, Captain (acting Major) John Henderson Hunter, M.C., R.A.M.C. (T.F.), to Dorothy Kenelm, only daughter of the late Frank Kenelm and Mrs. Kempson, Kingsbrook House, Bedford.

DEATHS.

ANGUS.—On August 23rd, at St. Cyrus, Scotland (very suddenly), aged 36, William Angus, M.D., D.P.H., Medical Officer of Health for Leeds. Interred at Aberdeen, August 25th.
CHEVERS.—On August 10th, at Southmead Military Surgical Hospital, Bristol, Major Herbert L. G. Chevers, R.A.M.C. (retired), aged 59.
FOX.—On August 16th, at Panyam, Nigeria, John Crofton, M.R.C.S., L.R.C.P.
HEWLETT.—On August 26th, at Andover, the result of a cycle accident, George Hewlett, Surgeon-Commander, R.N., retired.
HUMPHRY.—On August 29th, Reginald Humphry, M.R.C.S., L.R.C.P., of Nelson-road, Southsea, aged 67.
KAZANJIAN.—On August 10th, at Boston, Mass., following the birth of a daughter, Sophie, wife of Major V. Kazanjian, C.M.G.
KEITH.—On August 19th, at Bryanston-street, W., after a brief illness, Skene Keith, M.B., C.M., F.R.C.S.E., aged 61.
STEVENS.—On August 25th, at Gordon House, Bocking, Essex, Percy Richard Stevens, L.R.C.P. Lond., M.R.C.S. Eng., aged 61.
WRIGHT.—On August 28th, at Blakesley, Northants, Cyril Haworth Wright, M.B., Ch.B. Edin., D.P.H., R.C.P.S., aged 43.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE PERTHSHIRE UNIT.

THE following interesting letter from Nish has reached us through the kindness of "J. G. F.," who has forwarded it to us "in the belief that it will prove of interest to readers who have served lately in Macedonia, particularly with the Serbian Units."

The Perthshire Unit, Serbian Relief Fund,
Nish, Serbia, July 25th, 1919.

It's hard to realise that it's almost 6 months since I left England, yet it will be on August 14th. Although my address says "Nish" I'm really 40 kilometres (25 miles) from that town, out at Prokuplje, which is slightly north-west from Nish. We are right off the railway line, which at first made us awfully cut off when the weather was bad. Now of course the road is dry, so cars come out to us oftener; so far I've not one of my own.

I've *made* a hospital: well it has been a job, but there is much satisfaction now in looking over an extremely good garden on to four large marquees each holding 14 beds, another of 12 beds and a long one-storied building which holds 22 beds. We have a funny little cottage not half bad now it's really clean and for the rest of the staff I've rooms outside. Although I've only 60 beds, there is much work here, as there is a very large out-patient department. This hospital supplies accommodation for, or rather I should say, meets the urgent needs of a good many villages, as well as this town with its 7000 inhabitants. When first we got here in the early days of March we at once commenced a soup kitchen from which 1600 were fed daily, also we distributed clothing. But this town itself has not suffered as much as the villages. In these the picture of misery is too awful. In view of the facts that I'm soon to begin a distribution of clothes in villages within a radius of 30 kilometres I've been by degrees visiting a good many to see for myself how things were and what the most pressing needs were. In one village, only 13 kilos from here, I found only 5 houses standing, where originally 65 stood; all the rest are in ruins.

The people there now just live in what was once the cowhouse below the level of the ground or else in shelters built against the steep mountain side with neither light nor ventilation. In one small room I was told 13 slept, all on a hard mud floor. In one corner there was some wood ash, so I knew they had had a fire, in fact I saw the small black opening in the roof, the only ventilation, and I wondered what chance there was for these poor people should one fall a victim to the all too prevalent disease—tuberculosis.

I asked why there was such crowding in view of the fact that the weather was so pleasant for sleeping out, but was told that wolves came into the village every night which made it impossible to sleep outside, in fact the few animals that the people possess are taken inside as well for fear of being lost.

Almost all the houses had had the furniture removed. The village I mention was one quite near the forest, right up towards a high mountain range. The people told me what an awful time they had had. Their men were mostly with the Comitadji, living for three years in the forests. The Bulgars occupied all the villages during the day and took everything they could find, but retired for the night, as they were too frightened to remain on account of the Comitadji. As soon as night came, down came the Comitadji, and the women gave them as much food as they had been able to conceal from the Bulgars. Here in Prokuplje the houses bear little evidence of war, except in one place where a bomb fell; also the Public Buildings are riddled with shot holes—here the Bulgars in occupation of the town had to take refuge when the Comitadji from the forests on our mountains came down and stormed the town. This they did just after the fall of Monastir (December, 1916) as they were under the impression that an advance was then to be made. They kept storming the Town Hall for two days and then the Bulgars, 480 of them, gave in; the Comitadji held the town for 15 days and then were driven out once more by German heavy guns which had been brought up. Then the persecution of the women began; they were cut with knives, branded with hot irons and tortured in every possible way: the Bulgars demanding to be told where the Comitadji had gone. I have seen many of these women at our Dispensary with great seams all round their sides and down their backs, and in one case a woman came with an awful chest just one mass of holes, from which pus was pouring; the remaining evidence of when she had been prodded by a bayonet! These things must be seen to be believed. Beyond this lovely garden of mine, which we just made out of a rough field, I look across open country for a little way and then a glorious range of mountains rises; on the slope of a nearer one, just where now a cornfield ripens, 30 or 40 people of all ages and both sexes were done to death every night for trumped up trivial offences! Such is war!

Many men have found their families and many of the older soldiers have been demobilised and come home; but then I've met others who say they have been to their villages and have found just a heap of stones to show where once a comfortable home stood and that no trace of the family or word of their fate can be found.

I'm most tremendously interested in it all and only wish one could do more and work more rapidly, but I suppose every little helps. Just now in this place we've a typhoid epidemic, but during two weeks we have only had 14 cases. I've had to see to the disinfecting of the houses where cases have developed and have distributed soap and urged cleanliness. I work here entirely with a Czech Doctor and his partner, also a Czech. The senior is quite a capable man, he speaks only French, the other German; however, we jog along; no English doctor of course. We get many cases of malaria, but I've never once seen a mosquito. We all have nets up, but have so far not slept under them. I'm afraid this is a very long letter, but my pen runs away with me, because I'm so interested in my subject: .....

This interesting account provides ample evidences of the terrible sufferings which the poor country folk of stricken but victorious Serbia are undergoing. Clearly there is at

the moment a great demand for help, and the demand will last for some time, and it should not fail to appeal to all of us at home. The devotion to the Serbian cause which our women have shown should stimulate a material response.

THE CHILDREN'S COUNTRY HOLIDAYS FUND.

Sir Horace B. Marshall, the Lord Mayor of London, has issued an appeal on behalf of this Fund, through the agency of which it is hoped that over 20,000 London children will be given a fortnight's holiday in the country. A large number of poor children have already been sent away for a holiday, but there are hundreds more on the list, and the Fund is spending more rapidly than it receives. Additional donations are urgently required to prevent undue depletion of the reserve fund. Cheques made payable to the Fund should be sent to the Secretary, C.C.H.F., 18, Buckingham-street, Strand, W.C.2.

THE FOOD EDUCATION SOCIETY.

THE activities of the Food Education Society (honorary secretary, Mr. C. E. Hecht, M.A., M.C.A., Danes Inn House, 265, Strand, W.C. 2) are to be extended and the coöperation of allied societies has been successfully invited. It has been decided by the society to hold a conference in Manchester in 1920 on the lines of the Guildhall School conferences of 1912 and 1913, in which problems connected with the teeth figured prominently. (See "Our Children's Health at Home and at School" and "Rearing an Imperial Race.") A strong and representative committee is in course of formation. Steps are also being taken to constitute committees in Birmingham and other places, so as to arouse interest in, and secure adequate representation at, the conference and to arrange for a local campaign. Invitations will be issued on a large scale throughout the United Kingdom. A draft programme of the conference, with tentative suggestions for a local campaign, which include a travelling exhibition, and further particulars will be sent on receipt of a stamped addressed envelope, if application be made to to Mr. Chas. E. Hecht at the offices of the society.

LEFT- AND RIGHT-HANDED COUCHES.

To the Editor of THE LANCET.

SIR,—The modern couch sold as part of a "suite" has the head at the left end when the back rail is against the wall. The effect of this is that the occupant naturally reposes on his right side. Couches many years ago used to be made also with the head at the right end, so that the occupant would lie on his left side. This kind of couch, I find, is seldom made now, and I have a faint recollection that it was condemned because lying on the left side after a heavy meal brought on, or was supposed to bring on, indigestion or palpitation, or something worse. I am rather curious to know whether that was the real reason for the abandonment of such couches, which, I think, are called "right-handed" couches. Perhaps some of your readers know and could inform me.

I am, Sir, yours faithfully,

August 25th, 1919. LAYMAN.

PHYSICAL PROGRESS AND MENTAL RETROGRESSION.

THE testimony of all military medical officers is clear upon one point—namely, that although the physique of the last lot of recruits for the fighting line, called up about 1915–1916, was poor, yet the physique of those who had attained the age of 17 to 18 in 1917, and were then called up for training, was extraordinarily good. This fact was due in great measure to their having been well fed from the age of 14 or 15, i.e., from the beginning of the war. Their parents had had more money owing to increased wages, and had spent it wisely in giving the children better food. The same improved development due to the same factors may be noted in the children who are to-day between 11 and 13. Physical development, however, is not everything, as two paragraphs in the same issue of the *Times* showed one day last week. One of these deals with the case of a boy, aged 13, who showed a friend a small jar, saying, "It is rat poison. I am going to take it for the sake of a girl because she does not like me." He took it and eventually died from phosphorus poisoning. Evidence was given that "he was a boy for girls," and the father said that his son was strong willed and well developed physically. He had thought about telling his son concerning matters of sex, but had not done so. The other paragraph relates the familiar story of a window in a train being broken by a stone, the passengers in the carriage being covered with glass. It was presumably thrown by a boy, the fusion of the sexes has not yet got to the point of producing a girl who can throw a stone. Throwing seems to be a natural impulse in boys, or rather, we should say, the desire to hit a moving body with a missile is universal among them, but the impulse should be guided in the direction of wickets rather than trains. The suicidal youth seems to have been impelled by sexual impulses, which are normally strong and also unbalanced at the time of puberty. Moreover, the conditions of the last four years have undoubtedly tended to laxity in sexual matters and also to opportunity. It is to be feared that physical development has not gone hand-in-hand with instruction as to the necessity for keeping the bodily functions under control.

CURRENT SEXUAL DECORUM.

Qui s'excuse s'accuse. The number of pens at work lately (when there have surely been plenty of other things to put in the journals) defending phenomena like new styles of dancing, like mixed bathing followed immediately by much "jazzing," like the present fashion of scanty feminine dress both by land and sea, sufficiently demonstrates a change in public conduct in the matter of sexual decorum. Whether that change arises from a spirit of mere licence and rebellion, or from a new moral evaluation, is uncertain. Probably—ætiology being ever complex—both motives operate, with many others in addition. What is invariably mentioned as a cause when this subject is discussed is reaction from the strain of war; but since the change spoken of has been noticeable, though not quite so prominent as now, any time this last two or three years, if not for longer, it cannot play a great part. What lies far deeper is the lowering of moral tone brought about by war itself, for great dangers, as Bacon remarks, demand great delights, and the spirit of the soldier is in essence the spirit of the adventurer. War brings excitement, too, and excitement, especially in women, easily runs over into sexual manifestations. Again, women, upon whom society, as well as Nature, imposes a stricter code of morality, have been almost from the beginning of the war in a position of greater social and economic independence than formerly. It would be incorrect to lay exclusive stress upon factors like these, which a conventional moralist would call unfavourable. For the progress of human culture is perhaps showing that the indispensable barriers which Freud has called "shame, loathing, and morality" are not in their proper positions. They may, even now, be too narrowly set, may make libertines of too many.

TENACIOUS ADVERSARIES.

Mr. Aylmer Maude, a well-known authority on Russian affairs and literature, and the author of a life of Tolstoy, is responsible in the columns of the *Westminster Gazette* for the following story:—

"A curious instance of extreme tenacity of life among the lower races was mentioned to me by Major R. Black, R.A.M.C., now surgeon to the Dvina Force, and before the war a well-known practitioner in the Midlands. The case occurred at Bakaritsa. Two friends of Mongolian origin, in a labour battalion, played cards, and A won more than B liked to lose. Thereupon B got a sharp axe and drove it through A's skull and about 1½ in. into his brain. A was taken to hospital, where Major Black trephined him and repaired his brain. Next day A demanded his usual rations, and wanted to get up and go home to settle accounts with his friend. This was not allowed, but meanwhile B had been arrested, and, not wishing to submit to the Courts of the Western Barbarian, he hanged himself, and, after a period variously estimated at from five to ten minutes of suspension, was cut down. The surgeon was again sent for, and found the Russian attendants administering artificial respiration to the man at the rate of about 300 per minute, and nearly played out by their labours. This he slowed down to about 20, and after half an hour the man revived and was taken to the hospital ward his friend was in, as no bed was available elsewhere. On seeing him A became extremely violent, and it required six men to hold him down and prevent his exacting summary vengeance on B, who was still only semi-conscious. However, B, too, made a remarkable recovery, and half an hour later it took 12 men, six to each of the combatants, to prevent the two patients from fighting. Huge and repeated doses of morphia had no effect on either of them, but by arranging a bed in a separate ward for one of them murder was avoided, or at least deferred."

Mr. Maude, who is working on the Dvina front, gives a satisfactory account of the health of the troops.

"STAMMERING AND VOICE DEFECTS."

To the Editor of THE LANCET.

SIR,—Will you grant me sufficient of your valuable space to make a comment on Miss Mabel Oswald's paper on the above subject in your issue of August 23rd? Miss Oswald is mistaken in saying that "stammering and functional voice defects have until recently been looked upon as unfortunate disabilities, and no real scientific attempt was made thoroughly to deal with such cases, and hence there was no recognised cure." In 1892 my father, the late Emil Behnke, was invited to address the British Laryngological Association on this subject, to demonstrate cases, and to explain his method. This body of experts accepted his system for the treatment of stammering and speech defects as being thoroughly scientific and sound, and their opinion has been endorsed and maintained by the medical profession in general in the years that have elapsed. His works on the subject, together with those of my mother, the late Mrs. K. Behnke, are recognised text-books.

I am, Sir, yours faithfully,

KATE EMIL BEHNKE.

Earl's Court-square, S.W., August 26th, 1919.

THE VALUE OF MEDICAL SERVICE.

THE City Life Assurance Company, Limited, 6, Paul-street, Finsbury, London, E.C., possess the Medical Examiners' Nomination Form reproduced below, and have endorsed it for the inspection of one of our readers who applied for the medical fee of £2 2s.:—

SCALE OF FEES.

For Assurances up to and including £50, 2s. 6d.	These Fees refer to Industrial Proposals only.
For Assurances exceeding £50, 5s. 0d.	
For Assurances up to and including £50, 5s. 0d.	These Fees refer to Ordinary Branch Proposals only.
For Assurances up to and including £200, 10s. 6d.	
For Assurances exceeding £200, £1 1s.	

MEDICAL EXAMINERS' NOMINATION FORM: QUESTIONS TO BE ANSWERED BY THE MEDICAL EXAMINER.

Questions.	*Answers.*
1. Should the Directors decide to appoint you as Local Medical Examiner, will you undertake the usual duties connected therewith and accept the Fees above enumerated. NOTE.—In order to save the remittance of individual sums from time to time the Medical Fees will be paid by the Company Quarterly.	
2. What area is covered by you in connexion with your present practice?	
3. Please name the principal town and villages so covered. If occasion arises are you prepared to visit the proposers at their residences?	
4. Are you at present acting as Medical Examiner for any other Life Assurance Company. If so, please mention the Office or Offices represented.	
5. Are you in any way interested in the Company, either as a Policyholder or Shareholder? If not, is it your intention to become so interested?	

NOTE.—The Directors desire it to be distinctly understood that this nomination carries no guarantee as to the number of cases to be submitted for examination or remuneration to be received, and the Directors do not hold themselves responsible for any promise, verbal or otherwise, made by the Company's representative. Any application for shares, policies, &c., made by any Medical Officer must be made in the ordinary course of business, as the shares or policies applied for will be dealt with on this understanding.

Name .....

Address in full .....

.....

Qualifications .....

Date ..... 191 .....

Signature of Inspector or District Superintendent .....

THE COOLIDGE DENTAL RADIATOR TUBE.

THIS dental radiator tube has been designed for the purpose of making radiographs of the teeth and jaw, and is not intended for general radiographic work. An important feature of the radiator tube is that it is self-rectifying and can be used directly across the terminals of either an induction coil or a high-tension transformer without the necessity for any auxiliary rectifying device, whereas the universal Coolidge tube must be used on rectified current. The disposal of the cathode and anode gives the following advantages, it is stated, for dental work: (1) the rays are emitted from the tube in a line with the axis of the anode, rendering manipulation and adjustment easy; (2) the cathode circuit is grounded, so that there is only one high tension wire connected to that part of the tube farthest from the subject; and (3) it is possible to reduce to a minimum the distance between the film and focal spot by which satisfactory radiographs of the teeth and jaws are obtained with comparatively short exposure. Further details in regard to the advantages and conveniences of this special dental radiator X ray tube are furnished by the British Thomson-Houston Co., Ltd., of Rugby and 77, Upper Thames-street, E.C. 4, who are the patentees.

THE RANYARD NURSES.

THE annual report of the Nursing Branch of the Ranyard Mission for the year ending Dec. 31st, 1918, shows that their work among the sick poor has been carried on steadily under difficult conditions. The society is one of the oldest of the Voluntary Nursing Associations, having been founded in 1868 as an off-shoot of a mission to supply Biblewomen to the poorest and most neglected quarters of London. The Ranyard nurse attends patients of any denomination and those only who are under a doctor's care. She must be fully trained, and then undergoes a further period of six months' work under an experienced sister at the Central Hostel, 25, Russell-square, W., before she is allocated to the London district, where she will eventually reside and work. The staff, when complete, comprises 84 sisters and nurses, whose zeal and energy may be estimated by the fact that 11,853 cases were nursed during the year 1918. We are glad to note that the nurse's working day averages eight hours only and that night work is discouraged, also that the holiday conditions are good—five weeks a year and a day a month. The estimate of £130 a year for the equipment and maintenance of each nurse hardly suggests a lavish scale of remuneration under present conditions, but it must be remembered that the main source of income is voluntary contributions, and the balance-sheet already shows a deficit of £1584 for the nurses' fund. We trust that public support of this excellent society will be generous enough to warrant an increase of payment to its staff as well as an extension in its sphere of work.

J. F. T.—A coroner has great latitude in holding an inquiry as to the cause of death, and, where a suicide is seen to have been precipitated by the act of another, most coroners would take serious cognisance of the fact.

Medical Diary for the ensuing Week.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

LONDON HOSPITAL MEDICAL COLLEGE, in the Clinical Theatre of the Hospital.

A Special Course of Instruction in the Surgical Dyspepsias will be given by Mr. A. J. Walton and others:—

MONDAY, Sept 8th.—4.30 P.M., Lecture XI.:—Conditions Simulating Dyspepsia. (Dr. Hutchison.)

FRIDAY.—4.30 P.M., Lecture XII.:—The Differential Diagnosis of Medical from Surgical Dyspepsias. (Dr. Hutchison.)

Communications, Letters, &c., to the Editor have been received from—

A.—Assurance Medical Society, Lond.
B.—Miss K. E. Behnke, Lond.; Dr. D. W. Buxton, Lond.; Dr. A. T. Blesse, Altrincham; Dr. G. Blacker, Lond; Dr. W. A. Bullough, Chelmsford; Dr. G. E. Beaumont, Lond.
C.—Continental Surgical Supplies Co., Lond.; Messrs. A. H. Cox and Co., Brighton; Dr. G. Cobb, Lond.; Dr. D. Campos, Porto Alegre; Mr. J. Conqueror, South Shields; Chicago School of Sanitary Instruction; Commission for the Prevention of Tuberculosis in France, Paris, Director of.
D.—Mr. R. Dawson, Lond.; Dr. T. V. Dickinson, Lond.
E.—Maj.-Gen. Sir G. Evatt; Dr. T. W. Eden, Lond.; Lieut.-Col. W. McAdam Eccles, R.A.M.C.
F.—Dr. E. R. Fothergill, Hove; Factories, Chief Inspector of, Lond.
G.—Mr. T. H. Graham, Edinburgh; Major H. D. Gillies, R.A.M.C.; Dr. P. C. Gibson, Lond.
H.—Capt. H. A. Haig, R.A.M.C.; Dr. J. Haddon, Denholm; Dr. R. C. Holt, Didsbury; Mr. J. J. Hemming, Margate.
I.—India Office, Lond.; Dr. E. C. B. Ibotson, Corris.
J.—Dr. J. J. Jervis, Leeds.
K.—King Edward VII. Welsh National Memorial Association, Cardiff; Miss G. Keith, Lond.
L.—Mrs. D. C. Lea, Lond.; London School of Dental Mechanics for Ladies; Messrs. Lawson and Co., Bristol; Dr. S. C. Lawrence, Lond.; Dr. O. Langmead, Lond.; London Hospital Medical College, Sec. of.
M.—Mr. R. Mealing, Badminton; Dr. H. A. Macewen, Glasgow; Dr. B. Moore, Paignton; Mr. J. H. McEwan, Harrogate; Dr. W. O. Meek, Frimley; Ministry of Health, Lond.; Medicus; Dr. S. R. Meaker, Esher; Mr. F. H. Moore, Thaxted.
N.—National Alliance of Employers and Employed, Lond.
O.—Miss M. V. O. Oswald, Lond.
R.—Dr. J. Rivière, Paris; Dr. K. Rogers, Bromley; Dr. W. C. Rivers, Worsboro' Dale; Dr. J. D. Rolleston, Lond.; Ranyard Nurses, Lond.
S.—Mr. T. S. P. Strangeways, Cambridge; Prof. M. J. Stewart, Leeds; Prof. E. G. Slesinger, Lond; Dr. W. D. D. Small, Edinburgh; Scientific and Industrial Research Department, Lond, Sec. of.
T.—Mr. G. H. Thring, Lond.; Dr. W. J. Turrell, Oxford.
V.—Dr. P. C. Varrier-Jones, Cambridge.
W.—Sir G. Sims Woodhead, Cambridge; Sir G. Watson, Lond.; Dr. J. W. White, Glasgow; Dr. L. A. Weatherly, Bournemouth.

Communications relating to editorial business should be addressed exclusively to the Editor of THE LANCET, 423, Strand, London, W.C. 2.